Volume II

National Ocean Service

Social Science Plan

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

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An on-line version of this report is available at:
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Introduction

Introduction

This document represents the companion volume to the National Ocean Service (NOS) Social Science Plan: Volume I. This volume includes additional summary tables of proposed funding and personnel needs and detailed project descriptions with funding needs for projects listed in Volume I of the Social Science Plan.

Additional summary tables included in Volume II of the Social Science Plan summarize:

- Funding levels by NOS Office and National Oceanic and Atmospheric Administration (NOAA) Program for FY 2004 and FY 2005.
- Funding and personnel levels by NOS Office and fiscal year (FY 2004 and FY 2005).
- Number of projects and non-personnel costs by type of application and fiscal year, for FY 2004 and FY 2005.

As in Volume I, in Volume II of the Plan,FY 2004 is the baseline year and, as FY 2005 is almost completed, FY 2005 costs are known costs.

Detailed project descriptions are organized by NOAA Program and correspond to the sections and summary tables presented in Volume I. The NOS Social Science Teams hopes that users will find these detailed project descriptions useful as a starting point in discussing potential partnerships, as success in implementing much of this plan is contingent on developing partnerships both within and outside the agency.

For all tables presented in this volume of the Plan, dollar values represented thousands of dollars.

Additional details on the NOAA Programs included in this volume, as well as contact information for NOS Social Science Team members, can be found in Volume I of the NOS Social Science Plan.

Funding for NOS Offices by PPBES Program for Fiscal Years 2004 - 2005

PPBES Program / NOS Office	Ecosystems				Commerce & Transportation			Weather & Water
	Coastal & Marine Resources	Corals	Ecosystem Research	Habitat Restoration	Geodesy	Marine Transportation Systems	Emergency Response	Coasts, Estuaries & Oceans
CO-OPS	0	0	0	0	0	0	0	0
CSC	**407**	0	0	0	0	0	0	0
IPO	**187**	0	0	0	0	0	0	0
M&B: SP	**590**	0	0	0	0	0	0	0
MPA	**95**	0	0	0	0	0	0	0
NCCOS	**336**	0	0	0	0	0	0	0
NGS	0	0	0	0	0	0	0	0
NMSP	**182**	0	0	0	0	0	0	0
OCRM (not MPA)	0	0	0	0	0	0	0	0
OCS	0	0	0	0	0	0	0	0
OR&R	0	**320**	0	**521**	0	0	0	0

Table 1.1. NOS Office by PPBES Program: FY 2004 NOS funds.

PPBES Program / NOS Office	Ecosystems				Commerce & Transportation			Weather & Water
	Coastal & Marine Resources	Corals	Ecosystem Research	Habitat Restoration	Geodesy	Marine Transportation Systems	Emergency Response	Coasts, Estuaries & Oceans
CO-OPS	0	0	0	0	0	**350**	0	0
CSC	**1020**	**3**	0	0	0	0	0	0
IPO	**345**	**103**	0	0	0	0	0	0
M&B: SP	**394**	0	0	0	0	0	0	0
MPA	**50**	0	0	0	0	0	0	0
NCCOS	0	0	**747**	0	0	0	0	0
NGS	0	0	0	0	**125**	0	0	0
NMSP	**1136**	**135**	0	0	0	0	0	0
OCRM (not MPA)	0	0	0	0	0	0	0	0
OCS	0	0	0	0	**10**	0	0	0
OR&R	0	**302**	**540**	0	0	0	0	0

Table 1.2. NOS Office by PPBES Program: FY 2005 NOS funds.

Funding & Personnel Needs by NOS Office

NOS Office	FY '04		FY '05	
	$	NOS $	$	NOS $
CO-OPS Non-Personnel Costs	0	0	350	350
NOAA FTE Costs	0	0	0	0
Number of NOAA FTEs	0	0	0	0
NOAA Contract Personnel Costs	0	0	0	0
Number of NOAA Contract Personnel	0	0	0	0
Office Total	0	0	**350**	**350**
CSC Non-Personnel Costs	0	0	603	603
NOAA FTE Costs	327	327	340	340
Number of NOAA FTEs	4	4	4	4
NOAA Contract Personnel Costs	80	80	80	80
Number of NOAA Contract Personnel	2	2	2	2
Office Total	**407**	**407**	**1,023**	**1,023**
IPO Non-Personnel Costs	0	0	193	173
NOAA FTE Costs	187	187	275	275
Number of NOAA FTEs	2	2	3	3
NOAA Contract Personnel Costs	0	0	0	0
Number of NOAA Contract Personnel	0	0	0	0
Office Total	**187**	**187**	**468**	**448**
M&B: SP Non-Personnel Costs	650	325	545	118.84
NOAA FTE Costs	201	201	209	209
Number of NOAA FTEs	2	2	2	2
NOAA Contract Personnel Costs	64	64	66	66
Number of NOAA Contract Personnel	1	1	1	1
Office Total	**915**	**590**	**821**	**394**
MPA Non-Personnel Costs	95	95	0	0
NOAA FTE Costs	0	0	0	0
Number of NOAA FTEs	0	0	0	0
NOAA Contract Personnel Costs	0	0	50	50
Number of NOAA Contract Personnel	0	0	1	1
Office Total	**95**	**95**	**50**	**50**
NCCOS Non-Personnel Costs	336.1	336.1	697	697
NOAA FTE Costs	0	0	0	0
Number of NOAA FTEs	0	0	0	0
NOAA Contract Personnel Costs	0	0	50	50
Number of NOAA Contract Personnel	0	0	1	1
Office Total	**336**	**336**	**747**	**747**

NOS Office	FY '04		FY '05	
	$	NOS $	$	NOS $
NGS Non-Personnel Costs	0	0	125	125
NOAA FTE Costs	0	0	0	0
Number of NOAA FTEs	0	0	0	0
NOAA Contract Personnel Costs	0	0	0	0
Number of NOAA Contract Personnel	0	0	0	0
Office Total	0	0	**125**	**125**
NMSP Non-Personnel Costs	114.5	4.5	1256.8	1086.8
NOAA FTE Costs	78	78	81	81
Number of NOAA FTEs	1	1	1	1
NOAA Contract Personnel Costs	100	100	104	104
Number of NOAA Contract Personnel	1	1	1	1
Office Total	**292**	**182**	**1,441**	**1,271**
OCRM (not MPA) Non-Personnel Costs	0	0	0	0
NOAA FTE Costs	0	0	0	0
Number of NOAA FTEs	0	0	0	0
NOAA Contract Personnel Costs	0	0	0	0
Number of NOAA Contract Personnel	0	0	0	0
Office Total	0	0	0	0
OCS Non-Personnel Costs	0	0	10	10
NOAA FTE Costs	0	0	0	0
Number of NOAA FTEs	0	0	0	0
NOAA Contract Personnel Costs	0	0	0	0
Number of NOAA Contract Personnel	0	0	0	0
Office Total	0	0	**10**	**10**
OR&R Non-Personnel Costs	370	370	370.8	370.8
NOAA FTE Costs	209	209	209	209
Number of NOAA FTEs	2	2	2	2
NOAA Contract Personnel Costs	262	262	262	262
Number of NOAA Contract Personnel	3	3	3	3
Office Total	**841**	**841**	**842**	**842**
Total Costs	**3,073**	**2,638**	**5,877**	**5,261**

Table 2. Funding and personnel needs by NOS Office for fiscal years 2004 and 2005.

Number of Projects & Non-personnel Costs for Fiscal Years 2004 - 2005

Applications	# of Projects	NOS Costs ($k)	Total Costs ($k)
Resource Management/Conservation (including Modeling)	14	657	1,092
Program Products	0	0	0
Damage Assessment/Restoration	2	5	5
Program Evaluation	1	114	114
Basic Research/Methods Development	5	355	355
Capacity Building	0	0	0
Total	**22**	**1,131**	**1,566**

Table 3.1. Number of Projects and Non-Personnel Costs: FY 2004.

Applications	# of Projects	NOS Costs ($k)	Total Costs ($k)
Resource Management/Conservation (including Modeling)	32	2,473	3,089
Program Products	1	10	10
Damage Assessment/Restoration	2	5	5
Program Evaluation	7	708	708
Basic Research/Methods Development	5	339	339
Capacity Building	0	0	0
Total	**47**	**3,535**	**4,151**

Table 3.2. Number of Projects and Non-Personnel Costs: FY 2005.

Coastal and Marine Resources Program: Project Descriptions

Project Title:

National Survey on Recreation and the Environment (NSRE) 2000

Justification: NSRE is the only comprehensive source of information on recreational uses in the marine environment for the nation. The information provides the fundamental information for establishing the link between the recreational uses of the marine environment and the economy. NSRE provides the only data to assess trends in recreational uses of marine resources.

Methodology: Develop forecasting models to forecast participation and use for 19 marine recreation activities/settings using data from the NSRE 2000.

Outcomes: Increased knowledge on the nation's demand for outdoor recreational uses of the marine environment, which will provide better understanding of the pressures on marine resources and the economic value of this important use.

Performance Measures: N/A

Outputs: Reports

Status: Existing

Timeline: 01/01/1999-09/30/2005

Potential Partnerships: U.S. Forest Service economists provide technical review and advice. NOAA's Coastal Services Center.

Notes: Forecasts were made for the nation as a whole. Future efforts will consider developing models to forecast participation and use by states. Future efforts with NSRE 2000 data might include serving data on a Web site. No additional funding was required in FY 2004.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	0	40
Total Non Personnel	0	40
Leverage Ratio	-	1.00
Personnel (Contract Only)	30	22
Total NOS	30	62
Total (NOS+Other)	30	62

Project Title:

National Survey on Recreation and the Environment (NSRE) 2005

Justification: NSRE is the only comprehensive source of information on recreational uses in the marine environment for the nation. The information provides the fundamental information for establishing the link between the recreational uses of the marine environment and the economy. NSRE provides the only data to assess trends in recreational uses of marine resources.

Methodology: National telephone survey using Random Digit Dialing (RDD) of 50,000 households. For 19 activities/settings in the marine environment, estimate the number of participants by state. For 16 of these activities/settings, estimate the number of days of activity by state.

Outcomes: Increased knowledge on the nation's demand for outdoor recreational uses of the marine environment, which will provide better understanding of the pressures on marine resources and the economic value of this important use.

Performance Measures: N/A

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: NOAA and the U.S. Forest Service are co-leaders of a multi-agency partnership. U.S. Department of the Interior, Bureau of Land Management and National Park Service; U.S. Environmental Protection Agency; and the U.S. Coast Guard. U.S. Department of Agriculture, Economic Research Service, U.S. Army Corps of Engineers, and TVA.

Notes: In FY 2004, efforts were to begin planning process for survey, including developing funding partnerships, developing and revising interagency agreements with the U.S. Forest Service, and getting survey approved by the Office of Management and Budget (OMB).

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	325	74
Total Non Personnel	650	500
Leverage Ratio	2.00	6.75
Personnel (Contract Only)	0	0
Total NOS	325	74
Total (NOS+Other)	650	500

Project Title:

National Survey on Recreation and the Environment (NSRE) 2010

Justification: NSRE is the only comprehensive source of information on recreational uses in the marine environment for the nation. The information provides the fundamental information for establishing the link between the recreational uses of the marine environment and the economy. NSRE provides the only data to assess trends in recreational uses of marine resources. This will be the third five-year replication for marine recreation.

Methodology: National telephone survey using Random Digit Dialing (RDD) of 50,000 households. For 19 activities/settings in the marine environment, estimate the number of participants by state. For 16 of these activities/settings, estimate the number of days of activity by state. May consider changing sampling to Internet Panels (depending on available size of panels).

Outcomes: Increased knowledge on the nation's demand for outdoor recreational uses of the marine environment, which will provide better understanding of the pressures on marine resources and the economic value of this important use.

Performance Measures: N/A

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: NOAA and the U.S. Forest Service are co-leaders of a multi-agency partnership. U.S. Department of the Interior, Bureau of Land Management and National Park Service; U.S. Environmental Protection Agency; and the U.S. Coast Guard. U.S. Department of Agriculture, Economic Research Service, U.S. Army Corps of Engineers, and TVA.

Notes: In Year 1, efforts are to begin planning process for survey, including developing funding partnerships, developing and revising interagency agreements with the U.S. Forest Service, and getting survey approved by the Office of Management and Budget (OMB).

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	600	500
Total Non Personnel	2000	2000
Leverage Ratio	3.33	4.00
Personnel (Contract Only)	0	0
Total NOS	600	500
Total (NOS+Other)	2000	2000

Project Title:

FKNMS: Commercial Fishing Panels – Year 6

Justification: Due to uncertainties in projecting impacts of no-take areas on commercial fishermen, Florida Keys National Marine Sanctuary (FKNMS) initiated an effort to monitor the impact of the no-take areas on commercial fishermen. This effort was the first element of the Socioeconomic Research and Monitoring Program for the FKNMS, implemented following a meeting held in January, 1998, to design the monitoring program. Project provides information to assess the need for management changes and/or assistance/compensation programs.

Methodology: Four Commercial Fishing Panels: 1) General Monroe County-not displaced from no-take areas (control), 2) marine life collectors, 3) fishermen displaced from Sambos Ecological Reserve, and 4) Tortugas fishermen. Panels are monitored for catch, distribution of catch, and financial performance (costs, earnings and profits). Information is collected and reported annually.

Outcomes: More cooperative management process leading better management and protection of Sanctuary resources.

Performance Measures: Better compliance with Sanctuary regulations, especially those in no-take zones. Measured by reduced citations and fines.

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: National Marine Fisheries Service (NMFS) MARFIN Grant Program, Florida Fish and Wildlife Conservation Commission, and NOAA's Coral Reef Conservation Program.

Notes: The Socioeconomic Research and Monitoring Program for the FKNMS has been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Office of Management and Budget, Special Projects, Coastal Resources Assessment Branch and is Leader of the Coastal and Ocean Resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html. FY 2004 funding was obtained from NMFS MARFIN Grant.

Project Costs:

Costs ($k)	FY 2004
NOS Non Personnel	0
Total Non Personnel	50
Leverage Ratio	-
Personnel (Contract Only)	0
Total NOS	0
Total (NOS+Other)	50

Project Title:

FKNMS: Importance-Satisfaction & No-take Area Use

Justification: This project is providing critical information for monitoring how recreational users perceive the quality of Sanctuary resources. Comparisons with key ecological monitoring measures provides information to education and outreach personnel to assess needs for education and outreach efforts. Negative user perceptions drive demand and if the satisfaction with the quality of sanctuary resources is declining, this will eventually lead to declines in demand and negative impacts on the local economy.

Methodology: Five-year replication of Importance-Satisfaction Ratings for 25 natural resource attributes, facilities, and services. Baseline 1995-1996/replication 2000-2001. Surveys of residents and visitors of Monroe County/ Florida Keys National Marine Sanctuary (FKNMS) in 1995-1996 and 2000-2001. Statistical test on changes in mean ratings 1995-1996 versus 2000-2001 for both user groups. Changes in users' satisfaction scores compared with changes in ecological indicators for the same time period. Use of no-take areas. Baseline estimates.

Outcomes: Better compliance with Sanctuary management strategies and regulations leading to better protection of Sanctuary resources. Increased value to recreation and tourist users.

Performance Measures: Better compliance with sanctuary management strategies and regulations. Reduced violations.

Outputs: Reports and data

Status: Existing

Timeline: 01/01/1995-02/03/2004

Potential Partnerships: Local community, state, and local government.

Notes: This project is part of the Socioeconomic Research and Monitoring Program for the FKNMS. The Socioeconomic Research and Monitoring Program for the FKNMS has been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Office of Management and Budget, Special Projects, Coastal Resources Assessment Branch and is Leader of the Coastal and Ocean Resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html

Project Costs:

Costs ($k)	FY 2004
NOS Non Personnel	0
Total Non Personnel	0
Leverage Ratio	-
Personnel (Contract Only)	5
Total NOS	5
Total (NOS+Other)	5

Project Title:

FKNMS: Recreational Spiny Lobster

Justification: New members in the local community (with little to no institutional memory of the social conflicts before the two-day season) are advocating for the elimination of the two-day sport season and a reduction of the daily bag limit for recreational spiny lobster fishermen. The results of this project will provide information to managers about the economic value of the changes in the recreational spiny lobster daily bag limits.

Methodology: Survey data was obtained by socioeconomic add-on to a regular survey conducted by the State of Florida in 1992 and 2001 on recreational spiny lobster seasons (two-day and regular). Models were developed and analyzed by Dr. Walter J. Milon of the University of Central Florida, under contract to NOAA, for recreational spiny lobstermen's willingness-to-pay for changes in the daily bag limit in the Florida Keys National Marine Sanctuary (FKNMS).

Outcomes: Improved management of spiny lobsters. Sustainable fishery and sustainable tourist economy.

Performance Measures: Maintenance or increase in daily bag limits to recreational spiny lobster fishermen.

Outputs: Reports and data

Status: Existing

Timeline: 06/01/2000-09/30/2005

Potential Partnerships: Florida Fish and Wildlife Conservation Commission, The Nature Conservancy, and NOAA's Coral Reef Conservation Program.

Notes: This project is part of the Socioeconomic Research and Monitoring Program for the FKNMS. The Program has been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html.

Project funded for data collection in FY 2001 for $14.5k for extra mailing cost to State of Florida survey and $10k for contract to analyze data in FY 2003.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	0	0
Total Non Personnel	0	0
Leverage Ratio	-	-
Personnel (Contract Only)	0	2
Total NOS	0	2
Total (NOS+Other)	0	2

Project Title:

FKNMS: Spiegel Grove

Justification: Florida Keys National Marine Sanctuary (FKNMS) and Florida are under pressure from those who want to introduce artificial reefs. A moratorium is in effect until monitoring demonstrates whether artificial reefs could be beneficial ecologically. Users, of course, are concerned about socioeconomic impacts of the moratorium. Project will test if introduction of artificial reef reduces usage on surrounding natural reefs, while also increasing business to dive operators and impact on local economy.

Methodology: Estimate use on surrounding artificial and natural reefs both pre- and post-deployment of the *USS Spiegel Grove*. Dive logs from all dive operators and stratified random sample of on-water observation to establish ratio of non-dive operator use to total use. Extrapolate from dive log counts to total usage. Sample stratified season (summer and winter), type of day (weekday and weekend) and type of reef (artificial and natural). 72 days pre-deployments and 80 days post-deployment.

Outcomes: Provide information to management on whether introducing an artificial reef into a natural reef environment will reduce usage on surrounding natural reefs and thus expand capacity of Sanctuary resources. Also, support efforts to permit sinking of other artificial reefs in Sanctuary and other locations around the nation.

Performance Measures: Results of analysis are accepted by local dive operators and State of Florida and used in management decisions for permitting future artificial reefs.

Outputs: Reports and data

Status: Existing

Timeline: 08/01/2001-09/30/2005

Potential Partnerships: Dive operators providing logbook data and State of Florida.

Notes: This project is part of the Socioeconomic Research and Monitoring Program for the FKNMS. The Program as been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects, and is Leader of the Coastal and Ocean Resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html.

Project data collection was funded in FY 2001 and FY 2002 for a total of $136.7k.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	1.5	0
Total Non Personnel	1.5	0
Leverage Ratio	1.00	-
Personnel (Contract Only)	0	3.8
Total NOS	1.5	3.8
Total (NOS+Other)	1.5	3.8

Project Title:

FKNMS: Tortugas Pre-Post Evaluation, Commercial Fishermen

Justification: No-take areas are a new tool being used by both Sanctuary managers and fishery managers. No-take areas displace all consumptive users and could potentially have significant socioeconomic impacts. There are great uncertainties associated with projecting both short-term and long-term socioeconomic impacts on different user groups. This pre-post analysis will attempt to quantify what actually happened in comparison to what was projected.

Methodology: Survey of displaced fishermen from the Tortugas Ecological Reserve (established in 2001). NOAA conducted analysis of potential short and long-term socioeconomic impacts of closures on commercial fishermen as part of the requirements under National Environmental Policy Act (NEPA), Regulatory Impact Review (RIR) (Executive Order 12088), and the Regulatory Flexibility Act (impact on small businesses). This study will compare what actually happened to fishermen (catch and financial performance) compared to what was projected.

Outcomes: Provide evaluation of effectiveness of no-take areas as a management tool. Determine if there are positive or negative impacts on commercial fishermen displaced from no-take areas. If negative impacts, provide information to management to either change management strategies and/or provide information to design compensation and/or assistance programs.

Performance Measures: N/A

Outputs: Reports and data

Status: Existing

Timeline: 07/01/2004-09/30/2005

Potential Partnerships: National Marine Fisheries Service (NMFS) MARFIN Grant Program

Notes: This project is part of the Socioeconomic Research and Monitoring Program for the Florida Keys National Marine Sanctuary (FKNMS). The Program has been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html.

FY 2004 funding was obtained from NMFS MARFIN Grant.

Project Costs:

Costs ($k)	FY 2004
NOS Non Personnel	0
Total Non Personnel	60
Leverage Ratio	-
Personnel (Contract Only)	0
Total NOS	0
Total (NOS+Other)	60

Project Title:

CINMS: Marine Reserves - Federal Process

Justification: Meet socioeconomic impact analysis requirements of National Environmental Policy Act (NEPA), Regulatory Impact Review (RIR), and Regulatory Flexibility Act (impact on small entities—business and government).

Methodology: FY 2004 activities limited to preparing documentation of data, models, and methods for review of analyses of marine reserves in the Channel Islands National Marine Sanctuary (CINMS) for Science and Statistical Committee (SSC) of the Pacific Fishery Management Council. Attend two meetings to explain methods to SSC.

Outcomes: Establishment of federal portions of marine reserves and also of state portions (4/9/03). No-take areas resolve conflicts between consumptive and nonconsumptive users, establish balance of management between conservation and preservation, and provide study areas to support science and education. By representing socioeconomic interests potentially impacted, create more cooperative management process and higher compliance with no-take and other Sanctuary regulations and thus greater resource protection.

Performance Measures: No-take areas are a successful tool in managing resources in CINMS for multiple uses. Resolve conflicts between consumptive and nonconsumptive users and achieve balance between conservation and preservation.

Outputs: Reports and data

Status: Existing

Timeline: 01/01/1999-06/01/2005

Potential Partnerships: California Department of Fish and Game

Notes: In 1999, Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program (CORE) was asked to lead the Socioeconomic Panel for the two-year process to design marine reserve alternatives for the CINMS. CORE economists have analyzed many alternatives. Original contracts for data in FY 2000 and FY 2001 were about $85k. Travel to meetings from FY 2000 to FY 2003 was about $20k.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	3	3
Total Non Personnel	3	3
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	1.22
Total NOS	3	4.22
Total (NOS+Other)	3	4.22

Project Title:

CINMS: Nonconsumptive Recreation Use and Value

Justification: In recent assessment of marine reserves in Channel Islands National Marine Sanctuary (CINMS), there was no information on the extent of use by those engaging in nonconsumptive recreation by accessing the CINMS using private household boats. This group would be a major beneficiary of the marine reserves. Without this information, benefits of marine reserves are under counted. Further, there is no information about these users to guide education and outreach efforts.

Methodology: Surveys of nonconsumptive users to estimate total use and spatial distribution of use by type of use and in no-take areas versus open areas of CINMS. Estimate market and nonmarket economic value of use to nonconsumptive users. In addition, obtain importance-satisfaction ratings of key natural resource attributes and knowledge, attitudes, and perceptions of Sanctuary management strategies and regulations.

Outcomes: Better understanding of uses of Sanctuary by those engaging in nonconsumptive recreation in CINMS to improve management of Sanctuary resources.

Performance Measures: Development of reliable estimates of spatial use within the Sanctuary.

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: Resources Legacy Fund Foundation (RLFF) and California Department of Fish and Game. NOAA's Marine Protected Area (MPA) Center may provide logistical support and geographic information systems (GIS) support.

Notes: Since 1999, Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program (CORE) leading efforts to provide socioeconomic data and analysis for the CINMS. CORE economists helped develop a set of recommendations for Socioeconomic Research & Monitoring. In 2003, Dr. Leeworthy began efforts to develop partnerships to fund collection and analysis of information on nonconsumptive users of the CINMS.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	73.5
Total Non Personnel	73.5
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	73.5
Total (NOS+Other)	73.5

Project Title:

CINMS: Social Science Coordinator

Justification: This particular position was identified as a top priority by Channel Islands National Marine Sanctuary (CINMS) stakeholders at the March, 2003, workshop held to design a set of recommendations for a Socioeconomic Research and Monitoring Program.

Methodology: Social Science Coordinator collects some information, but overall responsibility is to synthesize social science information and deliver this information to management and stakeholders. Also, he/she develops requests for proposals and oversees contracts.

Outcomes: Complying with priority recommendation by 50 stakeholders and social scientists that CINMS hire an independent contractor as a Social Science Coordinator. This action will create a more cooperative management process and increase the probability with compliance with Sanctuary management strategies and regulations.

Performance Measures: Stakeholder approval and support of Social Science Coordinator.

Outputs: Other

Status: Existing

Timeline: Ongoing

Potential Partnerships: California Department of Fish aid Game and three central California National Marine Sanctuaries. NMSP may reorganize into regions and Social Science Coordinator may be assigned to serve all Sanctuaries in the region.

Notes: Since 1999, Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program (CORE), is leading efforts to provide socioeconomic data and analysis for the CINMS. In 2003, Dr. Leeworthy worked with CINMS to develop a position description and start identifying candidates for the Social Science Coordinator position.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	93
Total Non Personnel	93
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	93
Total (NOS+Other)	93

Project Title:

MBNMS: Nonconsumptive Recreation Use and Value

Justification: During the management plan review process, no information was uncovered on the extent of use by those engaging in nonconsumptive recreation. This group would be a major beneficiary of the marine reserves. Should the Monterey Bay National Marine Sanctuary (MBNMS) decide to address the issue of no-take areas, the lack of information on its user group will lead to under representation of this group and an undercounting of the benefits of marine reserves. There is no information about MBNMS nonconsumptive users to guide education and outreach efforts.

Methodology: Surveys of nonconsumptive users to estimate total use and spatial distribution of use by type of use and in no-take areas versus open areas of MBNMS. Estimate economic impact associated with activity in local communities and net economic value of direct use to nonconsumptive users. In addition, obtain importance-satisfaction ratings of key natural resource attributes and knowledge, attitudes, and perceptions of Sanctuary management strategies and regulations.

Outcomes: Information to assess the benefits of no-take areas in support of both MBNMS and California's Marine Life Protection Act (MLPA) process to create a network of marine protected areas across the State. Also, help MBNMS understand nonconsumptive uses of MBNMS and provide information to better design management strategies and guide education and outreach efforts.

Performance Measures: Development of reliable estimates of spatial use of MBNMS.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Resources Legacy Fund Foundation (RLFF) and California Department of Fish and Game. NOAA's MPA Center may provide logistical support, including possible GIS support.

Notes: Since 1999, Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program (CORE), is leading efforts to provide socioeconomic data and analysis for the CINMS. In 2003, Dr. Leeworthy began efforts to develop partnerships to fund collection and analysis of information on nonconsumptive users of the CINMS. In December 2004, RLFF allocated $170k to the study, but wanted their funds directed towards MBNMS.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	0
Total Non Personnel	170
Leverage Ratio	-
Personnel (Contract Only)	0
Total NOS	0
Total (NOS+Other)	170

Project Title:

Recreation and Tourism: NSRE

Justification: The National Survey on Recreation and the Environment (NSRE) 2005 will provide quantitative information about the use of coastal areas for recreation. The 2005 data collection will enable longitudinal analysis of recreation trends in the U.S.

Methodology: Phone survey

Outcomes: Data outlining attitudes and perceptions about recreation and the state of coastal resources.

Performance Measures: Recreation data collected and reports produced. The Coastal Services Center will evaluate the utility of the NSRE data based on how coastal managers use this information for decision-making purposes.

Outputs: Reports and data

Status: Existing

Timeline: TBD

Potential Partnerships: Special Projects Office, U.S. Department of Agriculture-Forest Service, U.S. Environmental Protection Agency, U.S. Department of the Interior-Bureau of Land Management.

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	48
Total Non Personnel	48
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	48
Total (NOS+Other)	48

Project Title: Identifying and Implementing Regional Priorities for Social Science Research on Marine Protected Areas

Justification: Baseline data on the human dimensions of ocean and coastal resources is limited and often difficult for coastal managers to access and employ. Gaps in socioeconomic and cultural information are particularly acute at the local and regional levels. Regional priority needs must be addressed in order to increase the effectiveness of efforts to plan and manage Marine Protected Areas (MPAs). The success of area-based management depends upon incorporating an understanding of the human dimension in planning, implementing, enforcing, and monitoring sites. Identifying regional research needs and developing targeted research plans for filling critical data gaps will result in more effective ecosystem management and build regional capacity.

Methodology: Identification of priorities is conducted through workshops that provide a preliminary review of the region's social science research efforts, summary of regional research institutions and information resources; archival review of the regional regulatory framework; and identification of participants from among governing bodies, research institutions, non-governmental organizations (NGOs), non-profits, and federal agencies. Workshops employ focus groups and targeted discussions resulting in research projects and strategies that reflect regional social science priorities. Two separate projects that reflect the highest regional priorities will be funded through this initiative. Methods will be tailored to meet the specific designs of each project.

Outcomes: Enhancement of the incorporation of social science into the planning, management, and evaluation of MPA sites and networks by identifying and implementing priority social science research projects in coastal regions; establishment of mechanisms for building regional capacity through partnering and leveraging resources; promotion of regional coordination among agencies, social scientists, and stakeholders.

Performance Measures: Development of partnerships and collaborations on regional social science priorities and the funding of research projects identified through the workshop process. Success will depend on the usefulness of the findings for improving the design, management, enforcement, and/or monitoring of MPAs in the region. Results should aid in determining best practices for MPA planning.

Outputs: Report

Status: Existing

Timeline: Ongoing

Potential Partnerships: Federal and state agencies, academic institutions, regional governing bodies and non-profit organizations.

Notes: In FY 2004, regional workshops were conducted in the Pacific Islands, South Atlantic, and Caribbean regions. FY 2005 and FY 2006 feature workshops in the Pacific Coast region, Northeast U.S., Great Lakes, and Gulf of Mexico. Implementation of research priorities emerging from the identification process will begin in FY 2006.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	60	0
Total Non Personnel	60	0
Leverage Ratio	1.00	-
Personnel (Contract Only)	50	70
Total NOS	110	70
Total (NOS+Other)	110	70

Project Title:
Human Use Patterns and Impacts

Justification: The method, tools, and data developed through this project will have broad applicability among coastal and marine resource managers and will assist decision makers in determining priority areas for management, identifying key stakeholders, and assessing management alternatives. Results will allow for better prediction of threats to key ecosystem and cultural resource variables by providing information on the spatial relationships between uses, cultural resources, and ecosystem features and to better understand the diversity of user groups, zones of use, compatibilities, and potential conflicts. The project will enhance the integration of social and natural science by developing indicators for predicting human use impacts on ecosystem and cultural resource variables.

Methodology: Design of the geographic information systems (GIS)-based interface for community-based and expert mapping of human use patterns will be developed through collaborations with governmental and non-governmental centers with GIS expertise. It will be designed to integrate data at varying scales and from multiple sources. Implementation of the methodology will employ interviewing, ethnographic research, and focus group studies for capturing use patterns and user conflicts and compatibilities. Development of the predictors for human use impacts on ecosystem and cultural resource variables will involve meta-analysis of existing databases and expert interviews.

Outcomes: Database of human uses, compatibilities, and ecological impacts on regional scale; GIS-based tool and methodology for capturing and analyzing patterns and intensity of human uses of marine environments and compatibilities/conflicts among uses; and a set of predictors for analyzing the impacts of human uses on key ecosystem and cultural resource variables.

Performance Measures: The project will incorporate an evaluation plan for assessing the effectiveness of the methodology and the data derived through its use. This evaluation will be conducted during regional coastal management planning processes for determining priority areas for new and/or enhanced management measures.

Outputs: Reports, data, guidebooks, and training

Status: Existing

Timeline: Ongoing

Potential Partnerships: Federal, state, and local management agencies; regional non-governmental organizations; and research institutes.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	35	0
Total Non Personnel	35	0
Leverage Ratio	1.00	-
Personnel (Contract Only)	72	100
Total NOS	107	100
Total (NOS+Other)	107	100

Project Title:

CINMS: Socioeconomic Research & Monitoring Plan

Justification: The Channel Islands National Marine Sanctuary (CINMS) and California Department of Fish and Game told stakeholders at the March, 2003 workshop that their recommendations would later be incorporated into a plan with funding for implementation. This effort attempts to initiate efforts to deliver on that promise.

Methodology: Focus Group comprised of CINMS stakeholders meet and prioritize recommendations for a Socioeconomic Research & Monitoring Plan from the set of recommendations developed at the March, 2003 workshop. CINMS staff then take prioritized recommendations and develop plan.

Outcomes: Socioeconomic Research & Monitoring Plan for CINMS developed with stakeholders. Improved cooperative working relationship with stakeholders.

Performance Measures: N/A

Outputs: Other

Status: Proposed

Timeline: TBD

Potential Partnerships: California Department of Fish and Game.

Notes: Social Science Coordinator for CINMS, NMSP-Headquarters economists and economists from NOS, Special Projects, Coastal and Ocean Resource Economics Program will attend workshop to provide information to stakeholders.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	30
Total Non Personnel	30
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	30
Total (NOS+Other)	30

Project Title:

Spatial Trends in Coastal Socioeconomics (STICS) Web Site

Justification: The primary objective of this Web site is to increase awareness and improve access for the coastal stewardship community to socioeconomic information in a timely fashion. While it is true that socioeconomic information can be obtained from the U.S. Census Bureau via the Internet, or from CD-ROMs sold by third-party vendors, compiling Census data is a very time-consuming process, requiring the user to extract data variables by individual area. The data are not in a format to allow for analysis by coastal areas or by watersheds, and visualization/analysis tools are not available in most cases. This Web site provides spatial patterns of socioeconomic data to more users with different levels of data and analysis needs.

Methodology: The project is a Web site that offers socioeconomic data aggregated at a variety of watershed and political levels as well as tools with which the user can analyze, map, and download the data.

Outcomes: Coastal Communities are better protected from risk to ecosystem, economic, and public health threats and priority land and water habitats are protected, restored, or enhanced as habitat for fish and wildlife. These outcomes will be accomplished through more effective management as a result of an expanded knowledge of pressures faced by coastal and ocean resources, as well as more focused outreach and education efforts based on increased knowledge of resource users.

Performance Measures: N/A

Outputs: Web site

Status: Existing

Timeline: Ongoing

Potential Partnerships: U.S. Census Bureau, Bureau of Economic Analysis (BEA), Coastal Services Center, National Estuarine Research Reserve System (NERRS), National Marine Sanctuary Program (NMSP), National Marine Fisheries Service (NMFS), and the NOS International Program Office.

Notes: Future activities planned to enhance this web site include: Creating a set of standard profiles for employment, serving data from the National Survey on Recreation and the Environment, serving BEA data from 2001 in the North American Industry Classification System (NAICS) format, serving data on territories and freely associated states, serving tools relating to a partnership with NMFS.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	5
Total Non Personnel	5
Leverage Ratio	1.00
Personnel (Contract Only)	15
Total NOS	20
Total (NOS+Other)	20

Project Title:

SBNMS Recreational Fishing Use and Value

Justification: There is no information on the extent of use by those engaging in consumptive recreational fishing in the Stellwagen Bank National Marine Sanctuary (SBNMS). Without this information, benefits of marine reserves are under counted. Further, there is no information about these users to guide education and outreach efforts.

Methodology: Surveys of consumptive recreational fishing users to estimate total use and spatial distribution of use within SBNMS. Estimate market and nonmarket economic value of use to consumptive users. In addition, obtain importance-satisfaction ratings of key natural resource attributes and knowledge, attitudes, and perceptions of Sanctuary management strategies and regulations.

Outcomes: Better understanding of uses of Sanctuary by those engaging in consumptive recreational fishing in SBNMS to improve management of Sanctuary resources.

Performance Measures: Development of reliable estimates of recreational fishing spatial use within the Sanctuary.

Outputs: Reports and data

Status: Existing

Timeline: 07/01/2005-06/30/2006

Potential Partnerships: State of Massachusetts and NOAA's Marine Protected Areas Center.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	65
Total Non Personnel	65
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	65
Total (NOS+Other)	65

Project Title:

Socioeconomic Assessment of NWHI Commercial Bottomfishing

Justification: The Northwest Hawaiian Islands (NWHI) Ecosystem Reserve is currently being evaluated for becoming the fourteenth National Marine Sanctuary. To support the Environmental Impact Statement (EIS) and Management Plan process, information is needed to assess socioeconomic impacts of alternative management strategies.

Methodology: Assessment of existing information (i.e., State of Hawaii logbook data). Surveys of the nine current fishers. Spatial analysis of existing logbook data.

Outcomes: Complete social and economic study of the NWHI Commercial Bottomfishing industry, including costs and benefits.

Performance Measures: Development of accurate estimates of use within the Reserve.

Outputs: Reports and data

Status: Existing

Timeline: 06/01/2004-03/30/2006

Potential Partnerships: State of Hawaii.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	10
Total Non Personnel	10
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	10
Total (NOS+Other)	10

Project Title:

History of Marine Animal Population in the SBNMS (HMAP)

Justification: This is a proof of concept effort and thus the benefits are speculative at this time. However, it is thought that this project will benefit partners both inside and outside NOAA, as it can further science on natural resources, assist in ecosystem management, promote understanding of maritime heritage, and provide new materials for education and outreach. If this proof of concept leads to satisfactory results in Stellwagen Bank National Marine Sanctuary (SBNMS), the methodology will be applied to other marine protected areas.

Methodology: University of New Hampshire's (UNH) History of Marine Animal Population (HMAP) Project/Gulf of Maine History Project pioneered the use of historical records that predate modern fisheries science to estimate historical biodiversity and biomass using modern population dynamics and statistical modeling. The history will include the history of human use to understand the impacts that humans have had on the ecosystem.

Outcomes: Reconstruct historical fish populations in SBNMS. This history includes describing both the biological characteristics and the history of the human users of the area. The work will be completed through a grant to UNH.

Performance Measures: N/A

Outputs: Report

Status: Existing

Timeline: Ongoing

Potential Partnerships: NOAA's Marine Protected Areas Center, National Centers for Coastal Ocean Science (NCCOS), National Marine Fisheries Service (NMFS), and UNH.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	276.7
Total Non Personnel	276.7
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	276.7
Total (NOS+Other)	276.7

Project Title:

Socioeconomic Characterization of 4 NMS Sites

Justification: Most of the current 13 National Marine Sanctuaries (NMS) have not systematically compiled socioeconomic information about the uses and users of the Sanctuaries. This lack of information constrains management actions, including education and outreach efforts.

Methodology: Review all available socioeconomic information and produce a report with a socioeconomic overview of what is known. Assess what is known with what is needed to address issues in Sanctuary Management Plan (gap analysis).

Outcomes: Four socioeconomic overview papers will be completed in 2005. These characterizations synthesize all existing data and information related to Sanctuary sites. This is the first phase in information gap analysis in support of management plan revisions.

Performance Measures: Completion of four overview papers.

Outputs: Report

Status: Existing

Timeline: 09/01/2004-08/30/2005

Potential Partnerships: N/A

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	0
Total Non Personnel	0
Leverage Ratio	-
Personnel (Contract Only)	50
Total NOS	50
Total (NOS+Other)	50

Project Title:

Socioeconomic Monitoring Initiative - Regional

Justification: The project supports the U.S. Ocean Action Plan, Advancing International Oceans Policy, by building partnerships that promote sustainable coastal management. By increasing the effectiveness of coastal management, this project contributes to fulfilling the NOAA Ecosystem Goal and supporting the Coastal and Marine Resources Program. Furthermore, this project provides a mechanism for better understanding coastal communities.

Methodology: The NOS International Programs Office (IPO) is working with regional partners in the Caribbean, Southeast Asia, East Africa, the Pacific, and the Red Sea to develop regional programs. The Caribbean and Southeast Asia have already developed regional guidelines, conducted six training workshops, and implemented socioeconomic monitoring at over 25 sites. More workshops and site implementation are planned as well as translation of the guidebooks into Spanish. The other regions are beginning new programs, which will begin with organizational meetings to be followed by drafting workshops for the regional guidelines.

Outcomes: The goal is to increase coastal managers' capacity to understand and incorporate the socioeconomic context into management programs by establishing socioeconomic monitoring programs around the world. Regional programs are underway in the Caribbean and Southeast Asia and programs are being developed in East Africa, the Pacific, and the Red Sea. These programs include the development of region-specific socioeconomic monitoring guidelines, training workshops, and funding for site implementation.

Performance Measures: Success will be measured by each region's ability to develop regional guidelines, conduct socioeconomic training workshops, and implement socioeconomic monitoring at sites.

Outputs: Web sites, guidebooks, training

Status: Existing

Timeline: Ongoing

Potential Partnerships: University of the West Indies, World Fish Centre, South Pacific Regional Environmental Programme, Coral Reef Degradation of the Indian Ocean, and Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden.

Notes: See Corals Program for years FY 2006 and beyond.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	70
Total Non Personnel	70
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	70
Total (NOS+Other)	70

Project Title:

NMSP Management Plan Review and Site Designation Related Data Collection and Studies

Justification: The 14 National Marine Sanctuary sites each undergo five-year management plan reviews and revisions (MPR). These are required by the National Marine Sanctuaries Act (NMSA). Site regulations are changed and/or added, and each of these require socioeconomic information and analysis to assess the benefits/costs/impacts to potentially affected constituents. For each of these MPRs, additional data collection and studies are required to fill gaps in existing information.

Methodology: Socioeconomic support of management plans involves a standard process:

1) Analysis of existing information.

2) Data gap analysis related to information needs defined through public meetings with site managers, sanctuary advisory councils, and user groups.

3) Needs assessment to fill data gaps.

4) Targeted original data collection.

5) Data analysis and presentation of results.

6) Periodic replication of studies designed to monitor socioeconomic values over time.

Outcomes: Data collection and studies will provide information to NMS managers and constituents to allow for more informed decision making. The data collection is designed to fill gaps in existing information.

Performance Measures: Develop a complete set of information related to user values and practices in National Marine Sanctuaries. Data gap analysis will be completed and these projects will be designed to fill those gaps.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: State Departments of Natural Resources, National Marine Fisheries Service, NOAA's Marine Protected Areas Center, NOS Coastal Services Center, and non-governmental organizations (NGOs).

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	400
Total Non Personnel	400
Leverage Ratio	1.00
Personnel (Contract Only)	100
Total NOS	500
Total (NOS+Other)	500

Project Title:

Integrated Socioeconomic, Biological, and Physical Science to Support Ecosystem-Based Coastal Management

Justification: Coastal resource managers (CRMs) do not have adequate capacity to: 1) develop tools for applying integrated databases and other information as needed to support ecosystem-based management (EBM); 2) integrate discrete information products from social, natural, and physical sciences; 3) develop the social assessments needed to support goal-setting for an implementation of ecosystem-based management; and 4) institutionalize the application of socioeconomic and ecological information to resource management as needed to support EBM. CRMs also need support on the use of social and economic indicators to measure performance.

Methodology: Per year, conduct: one social assessment, one environmental characterization for a single watershed or group of watersheds, and six visitor-use management trainings to build capacity in state coastal resource managers. The specific social science methods for each of these activities will be determined by the data needs and user requirements for each site.

Outcomes: This project links to both of the long-term outcomes of Coastal and Marine Resources Program (CMRP) Goal Team: a management component that supports healthy and productive ecosystems and an outreach component that supports a well-informed public acting as stewards. These outcomes will be achieved by linking new social science activities to existing ecosystem-based management efforts.

Performance Measures: Number of new data resources, numbers of decision-support tools, numbers of social assessments, completion of environmental characterization. Pre- and post-evaluations will be conducted for all project elements to assess effectiveness and measure performance. Numbers of individuals trained, numbers of support materials produced, and numbers of management plans developed will be used to assess outreach and training components.

Outputs: Reports, data, Web sites, guidebooks, and training

Status: Existing

Timeline: Ongoing

Potential Partnerships: State and local coastal resource management agencies, State Sea Grant offices, other NOS offices (Office of Ocean and Coastal Resource Management (OCRM) and Office of Response and Restoration (OR&R)), National Marine Fisheries Service, U.S. Environmental Protection Agency, and the National Park Service.

Notes: This project will be linked with similar Coastal Services Center efforts developing social science information and decision-support tools for hazards planning and mitigation.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	300
Total Non Personnel	300
Leverage Ratio	1.00
Personnel (Contract Only)	100
Total NOS	400
Total (NOS+Other)	400

Project Title:

CSC Customer Survey

Justification: Meet Coastal Services Center (CSC) and NOAA strategic objectives linked to providing products, services, and information to support sound coastal management.

Methodology: Online and mail survey.

Outcomes: Comprehensive source of data outlining the needs and issues of concern within the coastal management community

Performance Measures: Number of respondents, number of data sets compiled, number of reports of information, and evaluation of CSC products and services based on survey results.

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: Private consulting firm.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	50
Total Non Personnel	50
Leverage Ratio	1.00
Personnel (Contract Only)	50
Total NOS	100
Total (NOS+Other)	100

Project Title:

National Ocean Economics Project (NOEP)

Justification: Existing economic studies do not account for the full range of economic activity linked to the coastal/ocean economy. In addition, data related to the non-market value of these resources is not readily available to the coastal management community. Multiple needs assessments, the U.S. Ocean Action Plan, and input from managers strongly suggest a high level of need for sound economic data related to the ocean economy. The NOEP will fill this gap.

Methodology: The NOEP is a multi-year grant to a team of economists who are utilizing a range of economic models, assessment methods, and analytical methods to characterize the coastal/ocean economy.

Outcomes: Comprehensive data and information resources about the coastal/ocean economy

Performance Measures: Numbers of data resources/data sets and numbers of information products derived from NOEP data.

Outputs: Reports, data, and Web sites

Status: Existing

Timeline: Ongoing

Potential Partnerships: Other NOAA offices, U.S. Environmental Protection Agency, State Sea Grant Offices, Woods Hole Oceanographic Institution, and multiple academic institutions.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	250
Total Non Personnel	250
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	250
Total (NOS+Other)	250

Project Title:

Regional Socioeconomic Monitoring Program

Justification: Accurate and timely information on social, cultural, and economic factors is critical for effective coastal management. Despite the importance of the human dimension of resource management, there remains a lack of relevant socioeconomic data, an underdeveloped capacity for collecting and analyzing it, and a growing demand for guidance and training. This project will build capacity by identifying regional socioeconomic indicators and crafting region-specific guidance and tools for monitoring socioeconomic trends. The project will also build on the U.S. Ocean Action Plan and Executive Order 13158 goals to better coordinate and integrate regional networks of marine managed areas.

Methodology: The project will build on the work of NOAA International Programs Office (IPO) Global Socioeconomic Monitoring Initiative and other socioeconomic monitoring efforts by tailoring guidelines and tools for analyzing trends in socioeconomic conditions to specific regional needs. Training on use of the guidelines and tools will be piloted in regional sites. The project will also identify sources of secondary data for incorporation into monitoring design and may contribute to the global socioeconomic database for coastal management that is being developed by NOAA IPO and the World Fish Centre.

Outcomes: Develop region-specific socioeconomic indicators and provide coastal and ocean managers with guidance, training, and tools that will allow effective measurement of trends in socioeconomic conditions that relate to the health and sustainability of coastal resources and marine ecosystems. Establish regional capacity for continued monitoring of socioeconomic indicators.

Performance Measures: Enhanced capacity among resource managers to monitor socioeconomic indicators. Increased number of sites where social, cultural, and economic factors are being incorporated into management actions. Successful application may be measured by increased effectiveness of management processes through community outreach, greater stakeholder participation, and community development and increased effectiveness of management outcomes through incorporation of the human dimension in management design.

Outputs: Reports, data, guidebooks, and training

Status: Proposed

Timeline: TBD

Potential Partnerships: Federal partners (NOAA IPO, NOAA National Marine Sanctuaries, Minerals Management Service), state agencies, academic institutions, regional governing bodies, and non-governmental organizations (NGOs).

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4	Year 5
NOS Non Personnel	75	75	75	75	75
Total Non Personnel	75	75	75	75	75
Leverage Ratio	1.00	1.00	1.00	1.00	1.00
Personnel (Contract Only)	25	25	110	110	110
Total NOS	100	100	185	185	185
Total (NOS+Other)	100	100	185	185	185

Project Title:

Social Science Graduate Research Fellowship

Justification: *Phase 1:* The Social Science Graduate Research Fellowship (GRF) Program serves two purposes: it is a program that enhances knowledge and understanding of local estuaries through research and it is also a training program for young estuarine scientists. Current fellow projects fall into one of the following categories: non-point pollution and nutrient dynamics; habitat conservation and restoration; sustaining estuarine resources; biodiversity and invasive species; or anthropology/socio-economic topics. Out of over 60 current fellow projects, only five fall into the anthropology/socio-economic category. The funds above provide monies for travel, workshop development and promotional material development, and distribution.

Phase 2 / Full Implementation: The mission of the National Estuarine Research Reserve System (NERRS) is to promote stewardship of the nation's estuaries through research and education using a network of protected areas. One of the strategic goals of the system is to generate and transfer information to coastal decision makers to improve coastal management. To effectively educate people to make responsible choices that will not harm the resource, the Reserves need to know more about the values, opinions, economic, and sociological factors that effect the way that humans interact with estuaries. Reserve research and monitoring programs must include work that tracks and investigates socio-economic and demographic phenomenon and trends, as well as traditional environmental science.

Methodology: *Phase 1:* First-year money is to establish a network of scientists interested in working with the NERRS to develop a social science GRF program. Establishing this network will include conducting workshops and forums with academic institutions and attending relevant conferences. The first year will also be used to conduct workshops and needs assessment activities to determine priority social science research themes for the Social Science GRF program.

Phase 2: Methodology for specific projects will be described in detail in their proposals. This is a fellowship program. NOAA participation will be for reviewing the merit of the projects, designing a competitive process, and coordinating with a social science advisory board.

Full Implementation: This is not a specific study; this is an initiative to encourage the NERRS as platforms for social science through a fellowship program. Social science methods will be described in fellowship applications and reviewed by a team of qualified social scientists for merit.

Outcomes: *Phase 1***:** Establish a network of natural resource social scientists who have contacts at universities offering advanced degrees. Create a database of scientific reviewers for social science proposals. Develop a list of priority social science questions that are central to coastal management through a series of facilitated workshops. Create promotional materials and outreach materials for social science graduate students.

Phase 2: Competitive fellowship program implemented to fill five fellowship positions at five NERRS sites around the country. Funding five reserves instead of all 26 in the system in the first year will provide an opportunity to improve the outreach materials, application processes, review processes, and refinement of research questions. Each fellowship will have two-year funding attached to conduct social science research at a NERR.

Full Implementation: Unspecified

Performance Measures: *Phase 1:* Number of social scientists who have agreed to serve in a reviewing and/or advisory capacity for the NERRS Social Science GRF program. Social science questions of highest priority to the coastal management community have been identified and characterized. Promotional materials produced and distributed to market social science GRF.

Phase 2: Number of applicants (performance measure for marketing materials). Percent of applicants with projects receiving favorable merit reviews (indicator of quality projects being submitted).

Full Implementation: Number of social science investigations occurring at reserves. Percent of reserves using social science data and knowledge to improve management or encourage interdisciplinary research.

Outputs: Reports, data, Web sites, guidebooks, training, other

Status: Proposed

Timeline: TBD

Potential Partnerships: Universities.

Notes: *Phase 1:* Phase 1 of this project is to develop a strong network of social scientist to help launch and publicize the fellowship, to create an advisory group, to develop a list of priority social science research questions, and to develop promotional materials to attract students to the fellowship.

Phase 2: This is a fellowship program. The funds reflected in the contract category are to support five fellows at $20,000/year per fellow.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	25	0	0
Total Non Personnel	25	0	0
Leverage Ratio	1.00	-	-
Personnel (Contract Only)	0	100	520
Total NOS	25	100	520
Total (NOS+Other)	25	100	520

Project Title:

Knowledge, Attitudes, and Behavior

Justification: The U.S. Ocean Action Plan discusses the need for increased and enhanced delivery of education and training to key NOAA-related audiences to increase knowledge awareness and understanding of ocean and marine science and promote stewardship for ocean and coastal resources. A significant gap exists in NOAA's understanding of baseline knowledge attitudes and behaviors among key stakeholders relative to ocean and coastal resource issues environmental observations and challenges being confronted by ecosystem managers. Audience assessment data and ongoing monitoring can provide consistent messaging and content for educational and outreach products and it is necessary to establish if and how well our education and outreach efforts are succeeding.

Methodology: *Phase 1:* Create a working group to oversee the ongoing project. Establish who the target audiences are for coastal and ocean education and outreach materials. Develop a work plan to inventory and assess existing data, standards and references related to baseline knowledge, attitudes, and behaviors in target audiences. Develop literacy standards and target stewardship behaviors through intense interaction with other experts, members of the target audience, etc.

Phase 2: Conduct a baseline survey (contract) of target audience knowledge, attitudes, and behaviors. Develop products based on the results to inform outreach and education efforts. Continue to conduct regular surveys to monitor change.

Phase 3: Develop products based on the results of the baseline survey to inform outreach and education efforts.

Outcomes: Ability to track success in education, training, and outreach efforts. More targeted and consistent messaging of important coastal and ocean issues. Improved education and outreach materials. Increase in knowledge, changing attitudes, and behaviors

Performance Measures: Improved education and outreach materials (measured by percent satisfaction with content and delivery). Increase in knowledge, changing attitudes, and behaviors (pre-post testing, follow-up surveys).

Outputs: Reports, data, and training

Status: Proposed

Timeline: TBD

Potential Partnerships: National Marine Sanctuaries, Marine Protected Areas Center, Sea Grant, NOS, other NOAA programs, other federal agencies, and universities.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	12	160	25
Total Non Personnel	12	160	25
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	12	160	25
Total (NOS+Other)	12	160	25

Project Title:

ERD Social Science Coordination

Justification: The Coastal Zone Management Act (CZMA) and the National Environmental Protection Act (NEPA) require elements of social science. The Estuarine Reserve Division (ERD) has specific needs relating to the following: 1) transfer relevant information to coastal managers; 2) adhere to public process and social assessment requirements of the CZMA and NEPA; 3) appropriately characterize reserve communities and resources; 4) encourage reserves to develop comprehensive management plans, education, and outreach strategies and interdisciplinary research; and 5) collaborate with other NOAA social scientists to bring NOAA resources to reserves.

Methodology: Data analysis, literature reviews, potentially including social assessments, analysis of demographic information, cost-benefit analysis, knowledge, behavior, or attitudinal research, and developing socio-economic indicators for the National Estuarine Research Reserve System (NERRS).

Outcomes: Socio-economic indicators will be collected and analyzed to inform planning, evaluation, and performance measurement efforts. Management plans and NERRS designations will complete more robust public involvement processes, including economic and social assessments of communities surrounding reserves.

Performance Measures: Percent of NERRS that are monitoring socio-economic indicators. Increase in number of social science research projects taking place at reserves.

Outputs: Reports, data, Web sites, guidebooks, training, other

Status: Proposed

Timeline: 3/31/2005

Potential Partnerships: State agencies, universities, non-profits, other offices within NOAA and other federal agencies.

Notes: The ERD has a National Research Coordinator who coordinates research and monitoring across reserves and works to promote partnerships with other parts of NOAA and other federal agencies. The National Research Coordinator reviews site profiles, management plans, research grants, coordinates training and workshops, and ensures that local reserves are aware of funding opportunities and relevant conferences. A similar need for national social science coordination has been identified.

Project Costs: This project will require no additional funding above that required for NOS social science full-time equivalents (FTEs).

Project Title:

Social Science Research Fellowship Program

Justification: Ecosystem-based management depends upon the ability to identify and fill gaps in social science data needs on a regional level. Currently there is a lack of regional capacity to conduct the necessary research on the human dimensions of coastal and ocean environments that will inform ecosystem and area-based management efforts. This program will aid in the development of regional social science capacity and build knowledge of the critical social, economic, and cultural variables that affect resource use and are impacted by management.

Methodology: This project will establish a granting program that will add one research fellow to conduct research on the gaps in social science data in each of seven regions around the U.S, including the Hawaiian and Pacific Islands, Pacific Coast, Gulf of Mexico, South Atlantic and Caribbean, Mid-Atlantic, Northeast, and Great Lakes. The seven fellows will build the research program among a network of social scientists in management, academia, and the private sector working on area-based management issues. The fellows will be responsible for assisting in the identification of regional data needs and conducting research on social science priorities identified in each region.

Outcomes: The program will place one research fellow in each of seven regions around the country to develop and support the application of social science to meet regional area-based management needs. The long-term outcome of the fellowship is to build capacity for incorporating human dimensions research into coastal and ocean management.

Performance Measures: Development of regional capacity for the conduct of social science research in coastal and ocean management and conduct specific research projects to meet regional social science needs.

Outputs: Data and training

Status: Proposed

Timeline: TBD

Potential Partnerships: Federal and state agencies, academic institutions, regional governing bodies, and non-profit organizations.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	350	350	350
Total Non Personnel	350	350	350
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	350	350	350
Total (NOS+Other)	350	350	350

Project Title:

Coastal Development and Shoreline Change Decision-Support Tools

Justification: NOAA Strategic Plan Ecosystem Goal performance objective: "increasing the number of coastal communities incorporating ecosystem and sustainable development principles into planning and management." U.S. Commission on Ocean Policy recommendations to "enable states to… more effectively manage growth" (Recommendation 9-1) and "enable managers to address the pressures of coastal development … to achieve both economic growth and healthy coasts and watersheds."

Methodology: Workgroup development, facilitated workshops, forums, surveys to collect existing information. Analysis of existing data and the creation of a database.

Outcomes: Coastal managers and local planners will have reliable and objective data about the coasts of coastal development and shoreline management.

Performance Measures: Increase in percent of coastal managers who have access to information about socioeconomic impacts of development and shoreline change.

Outputs: Data and Web sites

Status: Proposed

Timeline: TBD

Potential Partnerships: Coastal Services Center (CSC) , Marine Protected Areas Center, Special Projects Office, local planning agencies, and state agencies.

Notes: Project will be done in cooperation with CSC.

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	310	310
Total Non Personnel	310	310
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	0
Total NOS	310	310
Total (NOS+Other)	310	310

Project Title:

Applied Social Science Coastal Management Fellowship

Justification: State and local coastal managers have limited capacity to collect and use social science information. This fellowship program will bring in highly-trained individuals to assist in these efforts. In addition, the program is directly responding to NOAA's mission to support the training and education in scientific fields relevant to coastal management.

Methodology: A comprehensive effort will be made to recruit students trained in a social science discipline. Additional assistance will be provided to states to help develop fellow proposals.

Outcomes: This project will complement existing Coastal Services Center coastal fellows programs. It will focus on placing individuals trained in the social sciences in state coastal management agencies to provide technical support and develop local capacity to collect and use social science information. This project links to both long-term Coastal and Marine Resources Program (CMRP) goal outcomes of building capacity in managers to support healthy ecosystems and supporting outreach efforts to create a well-informed public acting as stewards.

Performance Measures: Numbers of fellows placed and evaluation of state agencies capacity to collect and use social science information.

Outputs: Training

Status: Proposed

Timeline: TBD

Potential Partnerships: State and local coastal managers, universities, State Sea Grant offices, and other NOAA offices.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	600	600	600
Total Non Personnel	600	600	600
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	50	50	50
Total NOS	650	650	650
Total (NOS+Other)	650	650	650

Project Title:

Best Practices for Public Involvement Handbook

Justification: Public participation in coastal management activities is legally required at the national level under the Coastal Zone Management Act (CZMA), and the National Environmental Policy Act (NEPA). Requirements of these pieces of legislation include public notice of federal or state activity in the coastal zone; opportunities for public comment, public hearings, education, and technical assistance; and access to relevant documents. There is currently no handbook or list of best management practices available to help coastal zone managers plan, strengthen, and implement processes for public involvement. Request includes $20,000 for production and dissemination of handbook and $80,000 for a contract to write the handbook and lead project.

Methodology: At the request of many members of the state coastal management community, the Office of Ocean and Coastal Resource Management (OCRM) would like to develop a handbook of best practices for public involvement in coastal management. Methods to develop the handbook will include:

1) Identify and establish a group of staff from different departments of NOAA, the U.S. Environmental Protection Agency (EPA), non-government organizations, academia, and state coastal management agencies who have begun to think systematically about best practices for public involvement.

2) Coordinate a series of meetings to share ideas and generate a list of priorities and tools that have successfully been used to engage the public in resource decision-making processes.

3) Conduct a review of social science literature on public involvement.

Outcomes: State partners and OCRM staff use the handbook to improve the quantity, quality, and diversity of public participation. More informed CZMA policy and programming results in increased understanding and value for CZMA activities by residents of coastal communities. Local citizens and local government invest more time, money, and interest in coastal management interests.

Performance Measures: Increase in percent of coastal managers who have access to information about how to plan for appropriate public involvement. Increased participation, diversity, and satisfaction with CZMA-sponsored public involvement efforts.

Outputs: Guidebooks

Status: Proposed

Timeline: TBD

Potential Partnerships: Coastal states, Marine Protected Areas Center, EPA, and other NOAA offices (potentially NMFS).

Notes: This project description is for the initial review of existing data and needs. A new project will be created in the future based on the results.

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	130
Total Non Personnel	130
Leverage Ratio	1.00
Personnel (Contract Only)	80
Total NOS	210
Total (NOS+Other)	210

Project Title:

Economic Analysis of Coastal Conservation

Justification: The NOAA Strategic Plan states that one of the performance objectives of the Ecosystem Goal is to "increase the number of habitat acres conserved or restored." The U.S. Commission on Ocean Policy report recommends authorizing "a dedicated coastal and estuarine land conservation program." Land acquisition is expensive and justifying conservation can be difficult in the face of the obvious financial gains to local economies and tax bases resulting from development. Economists have analyzed the economic benefits of conservation for non-profits in the past and there is an opportunity to synthesize existing studies to identify the known benefits of conservation and to explore potentially unique benefits to preserving coastal habitats and habitat functions.

Methodology: Literature review, information gap analysis, and perhaps new research. If new data is needed, the following methodology would be used to conduct the new research:

1) Estimating costs: collecting usage information then either using a benefits transfer for the value parameter or using the travel cost method or other appropriate valuation methodology to estimate lost usage value for the resource being conserved.

2) Benefits estimation: scientific and education values, coastal protection, habitat, and other values depending on the land in question. Contingent valuation would be the preferred methodology to estimate these values in terms of existence value, bequest value, and option values.

Outcomes: NOAA, coastal managers, local planners, and non-profit organizations can document coastal conservation benefits to local economy. Greater support at the local level and in the U.S. Congress for conservation efforts.

Performance Measures: In development.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Partnerships will be based on the findings of the initial analysis of existing data. Federal agencies, non-profits, and universities.

Notes: This project will give coastal managers, local planners, conservation organizations, and NOAA strong evidence of the economic benefits of conservation. $30,000 is for development of products based on the results. If a second phase of this project is needed to create new data, a survey would be implemented first regionally and then nationally. This would require additional staff time at NOAA and a contract. 40 percent of a GS-11 level staff position is requested above to complete the gap analysis and literature review. This project would best be done in conjunction with the project, "Establishing the costs of coastal development," as these two studies will complement each other.

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	30
Total Non Personnel	30
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	30
Total (NOS+Other)	30

Corals Program:
Project Descriptions

Project Title:

Methods Development: Coral Valuation Study

Justification: Provide information for guidance on the choice of alternative management approaches for Hawaiian coral reefs in support of national coral reef conservation efforts.

Methodology: A national survey of U.S. households will be used to derive estimates of total economic value for Hawaii's coral reefs. Since a national sample is used, most of those surveyed will have never used or plan to directly use Hawaii's coral reefs, so estimated values will be primarily nonuse or passive economic use values. An internet panel is proposed using a stated preferences method to evaluate no-take areas as a management tool and values to support damage assessment/restoration efforts.

Outcomes: The study will provide a measure, at a national level, of the value U.S. citizens place on recreational and conservation services of alternative management approaches for the Hawaiian coral reefs.

Performance Measures: N/A

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: NOS Special Projects Office, university experts, etc.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	290	275	0
Total Non Personnel	290	275	0
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	6.04	9.08	9.08
Total NOS	296.04	284.04	9.08
Total (NOS+Other)	296.04	284.04	9.08

Project Title:

Socioeconomic Monitoring Initiative - Regional

Justification: The project supports the U.S. Ocean Action Plan, Advancing International Oceans Policy, by building partnerships that promote sustainable coastal management. By increasing the effectiveness of coastal management, this project contributes to fulfilling the NOAA Ecosystem Goal and supporting the Coastal and Marine Resources Program. Furthermore, this project provides a mechanism for better understanding coastal communities.

Methodology: The NOS International Programs Office (IPO) is working with regional partners in the Caribbean, Southeast Asia, East Africa, the Pacific and the Red Sea to develop regional programs. The Caribbean and Southeast Asia have already developed regional guidelines, conducted six training workshops, and implemented socioeconomic monitoring at over 25 sites. More workshops and site implementation are planned, as well as translation of the guidebooks into Spanish. The other regions are beginning new programs, which will begin with organizational meetings to be followed by drafting workshops for the regional guidelines.

Outcomes: The goal is to increase coastal managers' capacity to understand and incorporate the socioeconomic context into management programs by establishing socioeconomic monitoring programs around the world. Regional programs are underway in the Caribbean and Southeast Asia and programs are being developed in East Africa, the Pacific, and the Red Sea. These programs include the development of region-specific socioeconomic monitoring guidelines, training workshops, and funding for site implementation.

Performance Measures: Success will be measured by each region's ability to develop regional guidelines, conduct socioeconomic training workshops, and implement socioeconomic monitoring at sites.

Outputs: Websites, guidebooks, and training

Status: Existing

Timeline: Ongoing

Potential Partnerships: University of the West Indies, World Fish Centre, South Pacific Regional Environmental Programme, Coral Reef Degradation of the Indian Ocean, and Regional Organization for the Conservation of the Environment of the Red Sea and Gulf of Aden.

Notes: See Coastal and Marine Resources Program for FY 2005.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	30	-
Total Non Personnel	30	-
Leverage Ratio	1.00	-
Personnel (Contract Only)	0	-
Total NOS	30	-
Total (NOS+Other)	30	-

Project Title:

Socioeconomic Monitoring Initiative - Global

Justification: The project supports the U.S. Ocean Action Plan, Advancing International Oceans Policy, by building partnerships that promote sustainable coastal management. By increasing the effectiveness of coastal management, this project contributes to fulfilling the NOAA Ecosystem Goal and supporting the Coastal and Marine Resources Program. Furthermore this project provides a mechanism for better understanding coastal communities.

Methodology: The NOS International Programs Office (IPO) is developing the global socioeconomic database in collaboration with the World Fish Centre (WFC). The database will be linked to WFC ReefBase, which is the world's premier online information system on coral reefs. Socioeconomic monitoring sites will be able to input their data through the Web site. Viewers will be able to view raw data from the sites as well as quantitative analysis of global and regional trends in people's dependence on coastal resources, threats to coastal resources, governance of resources, and people's perceptions of resource conditions.

Outcomes: The goal of this project is to improve understanding of human factors related to coastal use and management on a global, regional, national, and site basis. This project will provide the first global socioeconomic database on coastal communities allowing for quantitative analysis to determine trends in people's dependence on coastal resources, threats to coastal resources, governance of resources, and people's perceptions of resource conditions.

Performance Measures: Success of the project will be measured by the population of the database with socioeconomic data from coastal sites around the world. Also, project success will be measured by the number of individuals accessing the database on-line and using its information in analysis of global, regional, national, or site-level socioeconomic conditions.

Outputs: Data and Web sites

Status: Existing

Timeline: Ongoing

Potential Partnerships: World Fish Centre, Global Coral Reef Monitoring Network, World Conservation Union, and coastal managers around the world.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	30
Total Non Personnel	30
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	30
Total (NOS+Other)	30

Project Title:

FKNMS: Commercial Fishing Panels – Years 7-10

Justification: Due to uncertainties in projecting impacts of no-take areas on commercial fishermen, The Florida Keys National Marine Sanctuary (FKNMS) initiated an effort to monitor the impact of the no-take areas on commercial fishermen. This was the first element of the Socioeconomic Research and Monitoring Program for the FKNMS implemented following a meeting held in January, 1998, to design the monitoring program. This project provides information to assess the need for management changes and/or assistance/compensation programs.

Methodology: Four Commercial Fishing Panels: 1) General Monroe County-not displaced from no-take areas (control), 2) marine life collectors, 3) fishermen displaced from Sambos Ecological Reserve, and 4) Tortugas fishermen. Panels are monitored for catch, distribution of catch, and financial performance (costs, earnings and profits). Information is collected and reported annually.

Outcomes: More cooperative management process leading to better management and protection of Sanctuary resources.

Performance Measures: Better compliance with Sanctuary regulations, especially those in no-take zones. Measured by reduced citations and fines.

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: National Marine Fisheries Service (NMFS) MARFIN Grant Program, Florida Fish and Wildlife Conservation Commission, and NOAA's Coral Reef Conservation Program.

Notes: The Socioeconomic Research and Monitoring Program for the FKNMS has been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Office of Management and Budget, Special Projects, Coastal Resources Assessment Branch and is Leader of the Coastal and Ocean resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html.

FY 2004 funding was obtained from NMFS MARFIN Grant.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	52.31
Total Non Personnel	52.31
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	52.31
Total (NOS+Other)	52.31

Project Title:

FKNMS: Knowledge, Attitudes & Perceptions of Management Strategies & Regulations

Justification: Supports evaluating the effectiveness of no-take areas as a management tool by user groups impacted by evaluating changes in knowledge, attitudes, and perceptions regarding various management strategies and regulations, especially the no-take areas. Knowledge, attitudes, and perceptions are key to understanding the behavior of different user groups and designing education and outreach efforts to correct for lack of knowledge or misperceptions.

Methodology: This is a 10-year replication of a study done in 1995-1996 through a Florida Sea Grant project. Three groups were included in the survey: 1) commercial fishermen, 2) dive operators, and 3) members of local environmental groups. Florida Keys National Marine Sanctuary (FKNMS) regulations took effect on July 1, 1997, and much has happened since 1995-1996, so not only will old regulations be evaluated, but also new baselines will be established on new regulations and management strategies.

Outcomes: Provide information to guide education and outreach efforts to improve Sanctuary management.

Performance Measures: Whether information proves useful in guiding education and outreach efforts and improves Sanctuary management.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: State of Florida and NOAA's Coral Reef Conservation Program (CRCP).

Notes: This project is part of the Socioeconomic Research and Monitoring Program for the FKNMS. The Program has been run since its inception in 1998 by Dr. Vernon R. (Bob) Leeworthy, who is currently located in the NOS, Special Projects office and is Leader of the Coastal and Ocean Resource Economics Program. See http://marineeconomics.noaa.gov/SocmonFK/keys.html.

FY 2005 funding NOAA's CRCP and FKNMS.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	83.25
Total Non Personnel	83.25
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	83.25
Total (NOS+Other)	83.25

Project Title:

Rapid Transboundary Watershed Assessment of the Mesoamerican Barrier Reef Systems (MBRS) Project

Justification: The MBRS Project was initiated in 2001, to enhance protection of the unique and vulnerable barrier reef ecosystem shared between Mexico, Belize, Guatemala, and Honduras through strengthened and coordinated regional policies, regulations, and institutional arrangements. In 2004, the MBRS Project team initiated a partnership with NOAA in order to complete a comprehensive regional assessment of six transboundary watersheds. The aim is to provide national-level decision-makers with information regarding the status, issues, and possible effects that various watershed management and policy options might have on the barrier reef system. A critical component of this will be the socioeconomic assessment, led by staff from the International Program Office (IPO).

Methodology: For selected communities within each of the six watersheds, the rapid socioeconomic assessment will collect information for the following 37 indicators: demographic (8), quality of life (health and household) (17); economic (7), and attitudes and perception (5). Data collection will largely focus on the collection of existing (secondary) information, mostly from national government agency databases of public records and social statistics. Where secondary data cannot address the data needs outlined under each variable, primary data will need to be obtained through either key informant interviews within selected communities using structured questionnaires, or focus group interviews using semi-structured questions and open-ended discussions.

Outcomes: 1) An improved understanding of how various policy options regarding watershed management may affect the socioeconomic conditions and trends operating within communities residing in transboundary watersheds along the Mesoamerican Barrier Reef System.

2) An improved socioeconomic understanding of basic socioeconomic parameters for communities living within these five watersheds, including demographics, quality of life, environmental perceptions, and economic uses.

Performance Measures: New and amended policy measures to address upland (watershed) management issues within the region will result in improved overall health of the MBRS, including: decreased volumes of land-based pollution into coastal waters, increased freshwater availability and quality, increased watershed ecosystem health, and enhanced ecosystem products and services. A corresponding increase in the environmental, economic, and social security should result.

Outputs: Reports, data, training, other

Status: Existing

Timeline: 01/01/2005-09/30/2005

Potential Partnerships: Mesoamerican Barrier Reef Systems Project; Global Environment Facility/World Bank; U. N. Environment Program; Governments of Mexico, Belize, Guatemala, and Honduras; and Tufts University.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	103
Total Non Personnel	123
Leverage Ratio	1.19
Personnel (Contract Only)	0
Total NOS	103
Total (NOS+Other)	123

Project Title:

CRCP Social Scientist/Economist FTE

Justification: Social Science/economics is an important component of the Coral Reef Conservation Program (CRCP) mission to support effective management and sound science to preserve, sustain, and restore valuable coral reef ecosystems. Dedicating an full-time equivalent (FTE) to serve in this capacity would enable the CRCP to more effectively address the social science/economic needs related to the management and conservation of coral reef ecosystems.

Methodology: FTE will provide social science/economic expertise in support of CRCP's mission of supporting effective management and sound science to preserve, sustain, and restore valuable coral reef ecosystems.

Outcomes: Provide social science/economic expertise in support of CRCP's mission of supporting effective management and sound science to preserve, sustain, and restore valuable coral reef ecosystems.

Performance Measures: FTE position for Social Scientist/Economist in the CRCP is created and filled.

Outputs: N/A

Status: Proposed

Timeline: TBD

Potential Partnerships: N/A

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4
NOS Non Personnel	5	5	5	5
Total Non Personnel	5	5	5	5
Leverage Ratio	1.00	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0	0
Total NOS	5	5	5	5
Total (NOS+Other)	5	5	5	5

Project Title:

Recreation & Tourism FKNMS 10-yr Replication

Justification: Recreation and tourism account for between 65 and 70 percent of the Monroe County, Florida, economy and the waters surrounding the Florida Keys are all in the Florida Keys National Marine Sanctuary (FKNMS). The baseline study was done in 1995-1996 and served as the census of recreation and tourism for the area. Information has been used in Sanctuary management, local and state governments, and local businesses in making investments to protect FKNMS resources and to promote sustainable development. Information is now 10 years old and in need of an update.

Methodology: Replicate study "Linking the Economy and Environment of the Florida Keys/Florida Bay," done in 1995-1996. Surveys of visitors and residents to obtain detailed information on use by region of the Florida Keys; demographic profiles; expenditure profiles; importance-satisfaction ratings; knowledge, attitude and perceptions of regulations; and information to support estimation of economic use values.

Outcomes: Information to support public and private investment in protection of Sanctuary resources.

Performance Measures: Increased public and private entities make investments in resource protection.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Monroe County Tourist Development Council, The Nature Conservancy, Florida Fish and Wildlife Conservation Commission, and local businesses.

Notes: This year's funding of $5k is to support planning effort to develop community partnerships and design survey sampling plans and questionnaires.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	5	200	150
Total Non Personnel	5	300	200
Leverage Ratio	1.00	1.50	1.33
Personnel (Contract Only)	0	0	0
Total NOS	5	200	150
Total (NOS+Other)	5	300	200

Project Title:

Recreational Fishing FKNMS: Spatial Bioeconomic Model

Justification: There has been increasing evidence that management of the fisheries requires spatially explicit bioeconomic models. Ecologists/biologists are recognizing that environments are not homogeneous but are patchy with different levels of productivity. Also spatial effort and how it responds to both economic and biophysical parameters is important to be able to reliably predict outcomes. Spatial use information can also help resolve conflicts between competing user groups by supporting zoning.

Methodology: Add socioeconomic component to spatial fishery stock assessment models being built by researchers at University of Miami, Rosenstiel School of Atmospheric and Marine Science (Lead, Dr. Jerry Ault). Spatial catch and effort data will be gathered at spatial resolutions consistent with the spatial stock assessment models.

Outcomes: Improved management of recreational fishing in FKNMS.

Performance Measures: Improved recreational fishing, including resolution of conflicts with other users. Satisfaction ratings by recreational fishermen.

Outputs: Reports, data, other

Status: Proposed

Timeline: TBD

Potential Partnerships: Florida Fish and Wildlife Conservation Commission

Notes: The funds requested here are to support the socioeconomic portion of the work. Total costs assume matching funds to support biological part of the project.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	100	100	100
Total Non Personnel	200	200	200
Leverage Ratio	2.00	2.00	2.00
Personnel (Contract Only)	0	0	0
Total NOS	100	100	100
Total (NOS+Other)	200	200	200

Project Title:

Alternative Livelihood Programs

Justification: Many coral reef ecosystems may be beyond carrying capacity for some uses and require reduction in uses to yield higher levels of sustainable services. For those displaced, compensation/assistance programs may be warranted.

Methodology: Hire contractors to assist those displaced by management strategies and regulations designed to protect or restore coral reef ecosystems. Contractors would compile information on extent of impact on those displaced, profiles of those displaced, and provide technical assistance to help people enter new livelihoods.

Outcomes: Assist people displaced by management strategies and regulations designed to protect or restore coral ref ecosystems (e.g., Marine Protect Areas or no-take areas). This will lead to building more cooperative management processes.

Performance Measures: Number of people displaced from coral ecosystems that successfully transition to alternative livelihoods.

Outputs: Training, other

Status: Proposed

Timeline: TBD

Potential Partnerships: Federal and state agencies that provide training and assistance to people transitioning in the workforce.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4	Year 5
NOS Non Personnel	0	0	0	0	0
Total Non Personnel	0	0	0	0	0
Leverage Ratio	-	-	-	-	-
Personnel (Contract Only)	100	150	200	400	600
Total NOS	100	150	200	400	600
Total (NOS+Other)	100	150	200	400	600

Project Title:

Review of Literature – On-line Annotated Bibliography

Justification: Current NOAA Coral Reef Conservation Program planning is inefficient because many hours are wasted trying to determine gaps in information to establish research priorities. An economic valuation review of literature/on-line annotated bibliography was produced in 2002, and is being updated annually. A similar effort is needed for the other social sciences.

Methodology: Gather all social science literature on coral reefs, except economic valuation, which has already been completed. Review and develop on-line annotated bibliography. Abstracts should contain essential findings of each report.

Outcomes: Allow for better planning through identification of gaps in information and better use of information developed.

Performance Measures: Better use of Coral Program Funds and better use of information. Customer satisfaction ratings (management and public).

Outputs: On-line annotated bibiliography.

Status: Proposed

Timeline: TBD

Potential Partnerships: NMFS, Sea Grant, NOAA's Office of Global Programs (OGP) Human Dimensions Program, and other federal and state agencies that manage natural resources/coral reefs.

Notes: Most of the work can probably be done with NOS social scientists. Might need some contract support for creating on-line database.

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	50
Total Non Personnel	50
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	50
Total (NOS+Other)	50

Project Title:

Technical Assistance: Socioeconomic Monitoring of Impacts of Coral Reef Management Measures

Justification: Most coral reef managers have no expertise in socioeconomics and so staff has no idea how socioeconomics can help them, but even when they do understand how socioeconomic information can help them, they have no idea how to establish a socioeconomic monitoring program or what to measure in the program. Funding and technical expertise is needed to get things started for many sites.

Methodology: Provide funding and technical expertise to establish socioeconomic monitoring programs at coral reef management sites. Identify management measures and user groups that will likely be impacted by management measures. Determine appropriate measures of socioeconomic impact and help implement monitoring.

Outcomes: Implementation of socioeconomic monitoring to determine the impacts of coral reef management measures.

Performance Measures: Number of coral reefs with socioeconomic monitoring programs. Satisfaction ratings (management and user groups).

Outputs: Guidebooks, training, other

Status: Proposed

Timeline: TBD

Potential Partnerships: Federal, state, and local agencies responsible for coral reef management, and non-governmental organizations (NGOs) involved in coral reef management.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4	Year 5
NOS Non Personnel	100	200	300	450	525
Total Non Personnel	100	200	300	450	525
Leverage Ratio	1.00	1.00	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0	0	0
Total NOS	100	200	300	450	525
Total (NOS+Other)	100	200	300	450	525

Project Title:

Reef Permit Evaluation Tool: SE FL & FKNMS

Justification: In the study, "Socioeconomic Study of Reefs in Southeast, Florida," managers mentioned that as a follow-up, they needed tools to help them evaluate permits for new artificial reefs and restorations of existing natural reefs. This follow-up was established as a "research priority" in NOAA's Coral Ecosystem Research Plan FY 2005 – 2010: Regional Priorities.

Methodology: Implement multi-attribute utility theory using surveys and stated preference methods on recreation and tourist users of artificial and natural reefs in the five county-area of Martin, Palm Beach, Broward, Miami-Dade, and Monroe counties, which includes the Florida Keys National Marine Sanctuary (FKNMS). Develop a model to predict use and economic value of reefs based on user and reef characteristics. Model will be incorporated into a tool to be used by reef managers in evaluating permits to introduce new artificial reefs and/or restoration of existing natural reefs.

Outcomes: Tool to support evaluations of permits to introduce new artificial reefs into environments with existing coral reefs and evaluation of coral reef restoration projects.

Performance Measures: Expansion of capacity of reefs to meet user needs. Increased use of artificial reefs, while keeping use on natural reefs within carrying capacity.

Outputs: Reports, data, other

Status: Proposed

Timeline: TBD

Potential Partnerships: Five Southeast Florida counties (Martin, Palm Beach, Broward, Miami-Dade, and Monroe) and the Florida Fish and Wildlife Conservation Commission.

Notes: Expect project to take three years with costs split evenly between NOAA's Coral Reef Conservation Program and other partners outside NOAA.

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	10	250
Total Non Personnel	10	500
Leverage Ratio	1.00	2.00
Personnel (Contract Only)	0	0
Total NOS	10	250
Total (NOS+Other)	10	500

Project Title:

Non-use Coral Reef Valuation: Comparative Study

Justification: Extending study from Hawaii to Florida or Puerto Rico will allow for fuller consideration of the total economic value of reefs in the Atlantic/Caribbean Region. The comparative study will allow for a richer evaluation of the factors determining non-use economic values of coral reef ecosystems.

Methodology: Apply methodology developed for Hawaii's coral reef ecosystem to estimate total economic value from a national sample of U.S. households to either Florida (FKNMS) or Puerto Rico. Because very few of those sampled nationally will be either current or future users of the reefs in either Florida or Puerto Rico, most of the value estimated will be non-use economic value or passive economic use value.

Outcomes: Provide comparative non-use economic values of coral reefs by extending study in Hawaii to Atlantic/Caribbean Region (Florida or Puerto Rico).

Performance Measures: Increased investment by public and private entities to protect and restore coral reefs.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: N/A

Notes: Project technical oversight and project contract management would be done by NOS economists in Special Projects and the Damage Assessment Center (DAC), with one contract personnel economist in DAC.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	250	250	250
Total Non Personnel	250	250	250
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	250	250	250
Total (NOS+Other)	250	250	250

Project Title:

Use Valuations of Coral Reef Jurisdictions

Justification: The costs of investments to protect and restore coral reefs is often high. However, the benefits are most times much greater than the costs, but have not been quantified. The result is an under investment in coral reef protection and restoration.

Methodology: Implement studies to quantify economic user values of coral reefs. Identify different uses of coral reefs, quantify extent of use by type of use, and estimate market and non-market direct economic use values for each type of use.

Outcomes: Supports public and private investments in coral reef protection and restoration.

Performance Measures: Number of jurisdictions with use valuations completed. Amount of public and private investment devoted to coral reef protection and restoration.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Federal, state, and local agencies with coral reef management responsibilities. Non-governmental organizations (NGOs) and private businesses.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	250	750	1250
Total Non Personnel	250	750	1250
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	250	750	1250
Total (NOS+Other)	250	750	1250

Ecosystem Research Program: Project Descriptions

Project Title:

Socioeconomic Indicators of Restoration Success

Justification: The U.S. Congress mandated that NOAA develop ecological and socioeconomic indicators of estuary restoration success under the Estuary Restoration Act of 2000. Congress wants monitoring indicators to see if estuary restorations are worth the investment.

Methodology: First, a literature review was conducted on socioeconomic indicators of restoration. This was followed by a two-day workshop held at University of Massachusetts-Amherst with social scientists from around the country. A matrix of socioeconomic indicators was developed. The matrix was then sent out after the workshop and reviewed/revised. A chapter was then drafted explaining the indicators. Issues of restoration scale were addressed and indicators were identified as they related to scale. Chapter was incorporated into larger book with ecological indicators. Future efforts will develop a guidebook that provides operational guidance on how to implement socioeconomic indicators and conduct an analysis of the use of the guidebooks and the impacts on outcomes.

Outcomes: Development of a guidebook for operationalizing socioeconomic indicators of estuary restoration success for estuary restorations done across the nation, including those done under the Estuary Restoration Act.

Performance Measure: Socioeconomic indicators of estuary restoration success are performance measures for evaluating estuary restorations.

Outputs: Guidebook

Status: Existing

Time Line: Ongoing

Notes: Original Planning, Programming, Budgeting, and Execution System (PPBES) Program was the Restoration Matrix Program that was later merged into the Habitat Restoration Program. Original review of literature funded in FY 2002 ($62k) and workshop and chapter development was funded in FY 2003 ($100k). FY 2003 funds remaining ($26k) will be used to conduct analysis of use of the guidebooks. FY 2003 funds carried over to FY 2004.

NCCOS Centers: Center for Coastal Monitoring and Assessment (CCMA) and Center for Coastal Fisheries and Habitat Research (CCFHR).

Potential Partnerships: National Marine Fisheries Service (NMFS) and representatives of universities and agencies that participated in developing the socioeconomic indicators chapter in the book on ecological and socioeconomic indicators. Potential funding source includes Congress, under the Estuary Restoration Act (NOAA appropriations).

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	26	20
Total Non Personnel	26	20
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	0
Total NOS	26	20
Total (NOS+Other)	26	20

Project Title:

Eutrophication: Socioeconomic Indicator Development and Application

Justification: Eutrophication is a major cause of water quality decline in coastal waters. Before many institutions take action, they need to understand the potential socioeconomic impacts of water quality declines due to eutrophication.

Methodology: A pilot study to develop socioeconomic indicators of the impacts of eutrophication to complement eutrophication water quality indicators. Socioeconomic indicators need to capture the link between water quality and human use (dissolved oxygen and recreational value of catch). Further research may be needed to establish relationships or key water quality variables to the value of human uses. Method development requires basic research to establish relationships in each region between water quality and particular species and the connection to human use. Application to estuaries and coastal waters nationwide will first depend on this basic research.

Outcomes: Development of a method for assessing the socioeconomic impact of eutrophication of the nation's coastal and ocean waters and successful application across the nation.

Performance Measure: Successful development of a method that could be expanded nationally. Managers are using the indicators to guide management.

Outputs: Report and training

Status: Existing project proposed for expansion.

Time Line: Ongoing

Potential Partnerships: U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service, NOAA's National Marine Fisheries Service, and state agencies involved in managing water quality in coastal and ocean waters.

NCCOS Centers: Center for Coastal Monitoring and Assessment (CCMA)

Notes: North Atlantic region is almost complete and report is expected in summer 2005. No funds in FY 2005.

Project Costs:

Costs ($k)	FY 2004
NOS Non Personnel	20
Total Non Personnel	20
Leverage Ratio	1.00
Personnel (Contract Only)	40
Total NOS	60
Total (NOS+Other)	60

Project Title:

Economic Impacts of HAB Events and the Value of Scientific Information

Justification: Harmful algal blooms (HABs) can cause many disruptions in activities that result in economic losses. Better scientific predictions of when and where HABs occur will allow people to respond and minimize the economic impacts. The project will estimate if these improved predictions have a net economic benefit.

Methodology: Apply value of information approach in benefit-cost analysis to evaluate the net benefits of obtaining scientific predictions on HABs.

Outcomes: Demonstration of the economic value of scientific information on HABs to support investments in better predictions.

Performance Measure: If project demonstrates positive net economic value of scientific information on HABs. Benefit-cost ratio.

Outputs: Report and data

Status: Existing

Time Line: Ongoing

Potential Partnerships: U.S. Environmental Protection Agency (EPA) and State agencies that manage coastal waters.

NCCOS Centers: Center for Sponsored Coastal Ocean Research (CSCOR)/ Coastal Ocean Program (COP)

Notes: In FY 2004, grant to Woods Hole Oceanographic Institute, Researchers Porter Hoagland and Guillermo Herrera.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	114	118
Total Non Personnel	114	118
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	0
Total NOS	114	118
Total (NOS+Other)	114	118

Project Title:

Barataria Multiple Stressor Program

Justification: Cost-benefit analysis and/or cost-effectiveness analysis are important inputs into decision making. This project attempts to employ integrated assessment techniques to evaluate different management options. Linking ecosystem functions to services that people value in a scientifically-credible way is important to support management decision making.

Methodology: This project will do cost-benefit and cost-effectiveness analyses for management options for the Barataria estuarine system (Louisiana). Changes in ecosystem functions will be connected to economic valuation for commercial fisheries, recreational use, water supply, and storm protection.

Outcomes: Cost-benefit and cost-effectiveness analysis of management options for the Barataria estuarine system.

Performance Measure: Managers believe cost-benefit analysis and or cost-effectiveness analysis is credible. Do they use comparative cost-benefit ratios and cost-effectiveness for different management options as one of the criteria for decision- making?

Outputs: Report and data

Status: Existing

Time Line: Ongoing

Potential Partnerships: U.S. Environmental Protection Agency, NOAA's National Marine Fisheries Service, state agencies that manage water quality and/or fisheries, and state and federal agencies involved in emergency management and local and state agencies involved in water supply.

NCCOS Centers: Center for Sponsored Coastal Ocean Research (CSCOR)/ Coastal Ocean Program (COP)

Notes: Cost of project outlined here is an estimate of the social science portion of the total project costs. This is a four-year project, funded in FY 2003. $50k per year.

Project Costs:

Costs ($k)	FY 2003	FY 2004	FY 2005
NOS Non Personnel	50	50	50
Total Non Personnel	50	50	50
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	50	50	50
Total (NOS+Other)	50	50	50

Project Title:

Scientific-Sociocultural Study in Cape Romain NWR: Gullah Community

Justification: This project provides necessary information for managers to design management strategies and justify investments to protect sweet grass habitats from development pressures by establishing link between development pressures, ecosystem functions, and services that ecosystems deliver that are valued and used by humans.

Methodology: Using the integrated assessment method, an assessment of the changing nature of cultural, ecological, and economic relationships in the region surrounding the Cape Romain National Wildlife Refuge (NWR) as coastal development progresses. The Gullah community is dependent on sweet grasses for making baskets, which provide an important source of the community's income. Development pressures are threatening sweet grass habitats. The integrated assessment method combines the science of understanding ecosystem responses to development pressures and the sociocultural dependence on the services provided by the ecosystems that human value in providing guidance for management solutions.

Outcomes: Protection of sweet grasses based on sociocultural dependence on the resource.

Performance Measure: Protection of sweet grass resource for use by Gullah community. Sustainable use of sweet grass by Gullah community.

Outputs: Reports and data

Status: Existing

Time Line: Ongoing

Potential Partnerships: Cape Romain National Wildlife Refuge, State of South Carolina, and Gullah community. Potential funding sources include NOAA, U.S. Fish and Wildlife Service, and State of South Carolina.

NCCOS Centers: Center for Coastal Environmental Health and Biomolecular Research (CCEHBR)

Notes: Costs include lab administration & overhead.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	62.10	120.00
Total Non Personnel	62.10	120.00
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	14.90	91.50
Total NOS	77.00	211.50
Total (NOS+Other)	77.00	211.50

Project Title:

CRES 2002: Integrating Science & Management in the Caribbean. (Subproject) Socioeconomic Studies

Justification: Population size and complexity of local communities, perceptions of the status of an ecosystem and its resources, and the local history of community participation are considered as select predictors of the success of community-based marine protected areas (MPAs). Integration with scientific information of the ecosystem is essential for successful implementation of marine reserves. This subproject will build on prior information and methods to assess the depth and nature of fishermen knowledge on species and their related habitats in southwestern Puerto Rico.

Methodology: In-depth interviews and focus groups with fishermen and stakeholders gauging the attitudes, perceptions, and beliefs, and estimating trends in policies, actions, events, potential for MPA development, and potential effects of MPAs (i.e., displacements of fishermen and users into other areas, changes in gear, and changes in target species).

Outcomes: A conceptual map of the resource user's perceptions of space, landscape, species, and interrelationships, which are essential for fishery management and the development of MPAs.

Performance Measure: More cooperative management process in creating MPAs. Compliance with regulations for designated MPAs.

Outputs: Report, data, and methodology

Status: Existing

Time Line: Ongoing

Potential Partnerships: None

NCCOS Centers: Center for Sponsored Coastal Ocean Research (CSCOR)

Notes: Project run by Dr. Manuel Valdez-Pizzini as a sub-component of a larger Coral Reef Ecosystems Studies project run by Dr. Richard Appledorn. The project will link with the other components in providing recommendations to resource managers for MPA implementation in Puerto Rico.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	64	64
Total Non Personnel	64	64
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	0
Total NOS	64	64
Total (NOS+Other)	64	64

Project Title: Tortugas Ecological Reserve: Integrated Assessment

Justification: Conduct first integrated assessment for a National Marine Sanctuary demonstrating the usefulness of the integrated assessment in management. Assessment of no-take areas effectiveness as a management tool from both an ecological and socioeconomic perspective.

Methodology: In the 1998 two-year process "Tortugas 2000" to design a no-take area in the Tortugas portion of the Florida Keys National Marine Sanctuary (FKNMS), Coastal and Ocean Resource Economics (CORE) Program economists built a geographic information system (GIS)-based tool to assess socioeconomic impacts of the alternative configurations of the no-take areas. Due to uncertainties is projecting socioeconomic impacts, a socioeconomic monitoring program was designed to monitor the catch, distribution of catch, and financial performance of commercial fishermen in the FKNMS. In addition, a pre-post analysis was initiated for commercial fishermen that fish the TSA, to test what socioeconomic impacts actually occurred versus those that were projected. This integrated assessment will expand the assessment to include the recreation industry (University of Massachusetts-Amherst).

Outcomes: Complete an integrated assessment combining ecological and socioeconomic information to evaluate the success of the no-take area regulations as applied to the Tortugas Ecological Reserve in the FKNMS. The integrated assessment will provide an assessment of the effectiveness of no-take areas as a management tool.

Performance Measure: Successful application of integrated assessment methodology. Managers find results of integrated assessment useful for management.

Outputs: Report, data, and assessment tool

Status: New project in FY 2005

Time Line: Ongoing

Potential Partnerships: FKNMS, Florida Fish and Wildlife Conservation Commission, and NOAA's National Marine Fisheries Service (NMFS). Potential funding sources include FKNMS, Florida Fish and Wildlife Conservation Commission, NMFS, and NOAA's Coral Reef Conservation Program.

NCCOS Centers: Center for Coastal Monitoring and Assessment (CCMA) and Center for Coastal Fisheries and Habitat Research (CCFHR)

Notes: Dr. Vernon R. (Bob) Leeworthy, Leader of the CORE Program will provide technical review and do the necessary paperwork to get Office of Management and Budget (OMB) approvals for any surveys. Researchers at the Virginia Institute of Marine Sciences and University of Miami, who do the commercial fishing panels monitoring and the pre-post analysis of the Tortugas for commercial fishermen, and who are doing a 10-year replication of knowledge, attitudes, and perceptions of management strategies and regulations in the FKNMS, will integrate efforts with the contractor for the recreation industry and the NCCOS, CCMA/CCFHR teams. $90k is for socioeconomic portion of total project costs only.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	90
Total Non Personnel	90
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	90
Total (NOS+Other)	90

Project Title:

Use of Traditional Knowledge in Ecosystem Management: Port Graham, AK

Justification: Many management strategies have ignored indigenous people, their knowledge of ecosystems, and how these people's livelihoods and cultures depend on ecosystems. This project first uses a conceptual model of ecosystems, which includes the human dimension, then uses social science techniques to capture traditional knowledge to better understand how ecosystems work, especially with respect to how Native Alaskan tribes depend on these ecosystems to support their livelihoods and culture. This will improve management of these ecosystems, especially as they relate to the uses by Native Alaskan tribes.

Methodology: The project's first task is to develop a conceptual model of the ecosystem, incorporating the human dimension. Social science techniques will be used to capture traditional knowledge from Native Alaskans in Port Graham on how ecosystems work, especially how they relate to supporting traditional uses. Year two of the project may extend efforts to Pribilof Islands, AK. If successful, may extend to other parts of country.

Outcomes: Better understanding of how ecosystems work and the relationship to traditional uses of the resources to guide development of improved ecosystem management strategies.

Performance Measure: Improved understanding of how ecosystems operate, especially the relation to traditional uses of the resources to guide development of improved ecosystem management strategies. Management uses in management plans.

Outputs: Reports and data.

Status: New project in FY 2005

Time Line: Ongoing

Potential Partnerships: Department of the Interior, Minerals Management Service, Native Alaskan Tribes, State of Alaska, and Chugach Regional Resource Commission.

NCCOS Centers: Center for Coastal Monitoring and Assessment (CCMA)

Notes: Project costs are one-year salary and travel costs for Dr. Kimani Kimbrough of CCMA to conduct the study (NCCOS Base funds). Expectations are that this project, if successful, will expand into a series of similar efforts elsewhere. Costs increasing four percent per year.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	0
Total Non Personnel	0
Leverage Ratio	1.00
Personnel (Contract Only)	100
Total NOS	100
Total (NOS+Other)	100

Project Title:

National Coastal Conditions Report: Socioeconomic Indicators of Environmental Health, Texas Bays and Estuaries

Justification: Estuaries serve as sinks for many of the wastes that are generated by economic activities within their watersheds and at the same time deliver a flow of services that are valued economically and that support socio-cultural uses. Socioeconomic indicators that both account for the negative impact of economic activities and the benefits associated with uses that depend upon the environmental health of the ecosystems is important to support integrated assessments of environmental health of the ecosystems and deliver information to policy/management.

Methodology: A pilot was conducted on Galveston Bay to develop socioeconomic indicators of environmental health. The list of indicators includes both indicators of activity that might negatively impact environmental health and indicators of those uses, which depend on a healthy environment. The Galveston Bay model included in the last edition of the National Coastal Conditions Report will be extended to the remaining bays in Texas. Socioeconomic indicators combined with ecological indicators will be included in an integrated assessment to monitor trends in the environmental health of these ecosystems. Out years will include an assessment to choose expansion to future estuaries to include in the program.

Outcomes: Provide information critical to supporting integrated assessments of environmental health by incorporating socioeconomic information with ecological information. Extend work currently being planned for the remaining bays in Texas.

Performance Measure: Does information lead to successful application of the integrated assessment methodology? Do managers find the information contributing to success in reaching their mission goals?

Outputs: Report and data

Status: New project in FY 2005

Time Line: Ongoing

Potential Partnerships: Texas Parks and Wildlife Department, University of Massachusetts, Texas Coastal Zone Management, and the U.S. Environmental Protection Agency (EPA). In out years, state agencies in state(s) of location of estuaries.

NCCOS Centers: Center for Coastal Monitoring and Assessment (CCMA)

Notes: Will request further project funding in future years. Funds cover personnel at University of Massachusetts, Texas, and travel by CCMA project management staff. Eventually, project will be extended to some other estuary, with the possibility of one social science position in state of estuary location.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	120
Total Non Personnel	120
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	120
Total (NOS+Other)	120

Project Title:

Coral Reef Ecosystem: Societal Values, Preferences, and Policy/Management

Justification: This is a five-year plan to develop a methodology and implement it to assess current management and policies in the management of coral reef ecosystems with respect to how they meet societal values and preferences. Research questions include: Are current policies and management strategies delivering what the public wants from coral reef ecosystems? and What is the public's knowledge, attitudes, perceptions, and beliefs with respect to the ecosystem services produced by coral reef ecosystems and the health status of those systems in continuing to deliver those services? Answers to these questions will guide policy makers, managers, and education and outreach personnel, leading to better management.

Methodology: Develop a methodological approach for evaluation of policies and management strategies of coral reef ecosystems with respect to how they are meeting societal values and preferences for these ecosystems. Guiding documents will be reviewed and users and nonusers of coral reef ecosystems will be surveyed to obtain measurements on their values and preferences of ecosystem services generated by coral reefs. Techniques such as expectancy/discrepancy analysis and/or importance-performance analysis will be used. Information on knowledge, attitudes, perceptions, and beliefs about coral reef ecosystems will be gathered to support analyses and guide education and outreach efforts.

Outcomes: Guidance to policy/management and education and outreach to help better align policy and management of coral reef ecosystems with societal values and preferences.

Performance Measure: Policy makers and managers alter policies and management strategies to better align them with societal values and preferences. Changes in policies and management strategies.

Outputs: Report, data, and methodology

Status: New project in FY 2005.

Time Line: Ongoing

Notes: Project run by Dr. David Loomis at the University of Massachusetts-Amherst. Possibility that this project could coordinate efforts to update project, "Linking the Economy and Environment in the Florida Keys/Florida Bay." If this project goes forward, it would provide a platform to survey both residents and visitors to Monroe County that use the coral reef ecosystem of the FKNMS. Need to try and get funding through NOAA Coral Reef Conservation Program.

Potential Partnerships: States of Florida, Texas, and Hawaii; U.S. Territories and Freely Associated States; and local governments, businesses, and non-governmental organizations (NGOs) in Florida Keys.

NCCOS Centers: Headquarters (HQ)

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	65
Total Non Personnel	65
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	65
Total (NOS+Other)	65

Project Title:

Socioeconomic Impact of Harmful Algal Blooms: Alaska

Justification: Harmful algal blooms (HABs) have severe impacts on human health, marine mammal mortality, and shellfish and finfish resources, and disrupt aquatic food webs. HABs disproportionably affect subsistence communities where there is greater dependence per capita on marine resources for protein. Direct economic impact is augmented by the social consequences of not having resources to harvest or customary local products for traditional ceremonies. Important to any socio-economic study of HAB-related events would be the incorporation of the local knowledge about why HABs occur, what measures are used to detect or test the safety of seafood in the local communities (cats as bioassay organisms), and the treatment of HAB-related illness by traditional methods.

Methodology: Integrate with the project "Use of Traditional Knowledge in Ecosystem Management: Port Graham, AK," focusing on the impact of HABs on Native Alaskans. Use ethnographic/oral history methods to understand uses and risks to Native Alaskans on how their health is affected by HABs looking at public health and medical records, traditional methods of treating illnesses related to HABs, and economic and social consequences from lost harvest or customary products of traditional ceremonies.

Outcomes: Understanding the socioeconomic impacts of HABs is critical to developing the support to make investments in controlling or eliminating impacts.

Performance Measure: Reduced health costs due to HABs. Reduction in medical costs, lost work days, or lost harvest. Reduction in lost harvest opportunities and consequential economic and social impacts.

Outputs: Report and data

Status: Proposed

Time Line: TBD

Potential Partnerships: Native American Tribes in Alaska and public health officials in Alaska. Potential funding sources include Oceans and Human Health Initiative; Department of the Interior, Minerals Management Service; Native Alaskan Tribes, State of Alaska; and Chugach Regional Resource Commission.

NCCOS Centers: Center for Coastal Monitoring and Assessment (CCMA) and Center for Coastal Fisheries and Habitat Research (CCFHR)

Notes: Dr. Kimani Kimbrough of CCMA is conducting study "Use of Traditional Knowledge in Ecosystem Management: Port Graham, AK." Pat Tester of CCFHR will have to coordinate with Dr. Kimbrough. Possibly extend to Pribilof Islands in future.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	50
Total Non Personnel	50
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	50
Total (NOS+Other)	50

Project Title:

Socioeconomic Impact of Harmful Algal Blooms: Florida

Justification: Harmful algal blooms (HABs) have severe impacts on human health, marine mammal mortality, and shellfish and finfish resources and disrupt aquatic food webs. Florida has been affected by several forms of HABs. Ciguatera fish poisoning renders fish, especially the large, predatory species, inedible. Another consequence of HABs is the closure of large stretches of shellfish habitat. HABs can have impacts on the health of humans and economic and social costs. Documentation of these costs will provide guidance in investments in research to better understand causes and consequences of HABs and in predicting and avoiding damages from HABs. Information on who is impacted, what they know about HABs, and how they get their information can help avoid consequences of HABs.

Methodology: Estimate economic and social costs of HABs to recreational and commercial fisheries. Health effects and lost recreation/tourism and commercial fishing values. Surveys of health records on sickness due to HABs to estimate losses due to medical costs and lost days of work. Lost recreational/tourism and commercial fisheries due to closures in local economies and loses to recreational/tourist users due to lower quality of resources. Surveys on knowledge, attitudes, perceptions, and beliefs about HABs, to provide basis of behavioral responses.

Outcomes: Understanding the socioeconomic impacts of HABs is critical to developing the support to make investments in controlling or eliminating impacts.

Performance Measure: Reduced health costs due to HABs. Reduction in medical costs, lost workdays, or lost harvest. For recreational users, lost value to recreators and lost value to local economies.

Outputs: Reports and data

Status: Proposed

Time Line: TBD

Potential Partnerships: Florida Keys National Marine Sanctuary, Florida Fish and Wildlife Conservation Commission, and Florida Department of Environmental Protection. Possible funding sources include Oceans and Human Health Initiative, Florida Fish and Wildlife Conservation Commission, and Florida Department of Environmental Protection.

NCCOS Centers: Center for Coastal Fisheries and Habitat Research (CCFHR)

Notes: Other areas of concern are U.S Virgin Islands and Puerto Rico, Gulf of Mexico regions, Hawaii, and Pacific Northwest. Study could be extended to other areas of the country in future years. Contact Pat.Tester@noaa.gov, (252) 728-8792.

Project Costs:

Costs ($k)	Year 1	Year 4
NOS Non Personnel	100	100
Total Non Personnel	200	200
Leverage Ratio	2.00	2.00
Personnel (Contract Only)	0	0
Total NOS	100	100
Total (NOS+Other)	200	200

Project Title:

Invasive Indopacific Lionfish–Socioeconomic Impact of the Invasion

Justification: Within less than a decade since the first documented report, the invasive Indo-Pacific Lionfish have become established along the entire southeast coast of the United States. This may have profound and long-lasting ramifications ecologically, economically and also socially. Increasing media interest in this invasion only increases the impact of this invasion on public perception. Although the ecological impact is still unknown, it is predicted to increase over time. Considering the media's involvement, detrimental socio-economic impacts are also likely increase due to this invasion. An evaluation of the social impact of this invasion is important in understanding overall impact and even mitigating the effect of an invasive species.

Methodology: Apply multi-attribute utility theory to the invasive species, the Indopacific Lionfish, which has been identified in coastal and ocean waters of North Carolina. The method allows for evaluation of what people would be willing to pay for different programs that have different outcomes. Best available scientific information is used to develop management programs and expected outcomes. People are asked to choose amongst programs based on ranges of estimated costs of programs. Researchers then conduct benefit-cost analyses of different management alternatives.

Outcomes: Understanding the socioeconomic impacts of invasive species is critical to developing the support to make investments in controlling or eliminating impacts.

Performance Measure: Federal and state agencies make significant investments in controlling impacts of the invasive lionfish.

Outputs: Reports and data

Status: Proposed

Time Line: TBD

Notes: Assume that NOAA will pay 50 percent of project costs.

Potential Partnerships: NOAA's National Marine Fisheries Service, National Undersea Research Program (NURP) and North Carolina Fisheries.

NCCOS Centers: Center for Coastal Fisheries and Habitat Research (CCFHR)

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	125
Total Non Personnel	250
Leverage Ratio	2.00
Personnel (Contract Only)	0
Total NOS	125
Total (NOS+Other)	250

Project Title:

Socioeconomic Valuation of Shoreline Stabilization Projects in NC

Justification: Increased coastal development, boating, weather events, and rising sea level all contribute to the erosion of shorelines and the resultant increase in efforts to stabilize shorelines. The negative effect of shoreline hardening on estuarine and coastal ecosystem function is now recognized in the scientific literature, and alternative approaches are being developed to preserve ecosystem function and maintain shoreline integrity. It is important for policy/management that these alternative stabilization approaches be evaluated, including an assessment of how people value the different types of ecosystem services generated by alternative approaches.

Methodology: Compare natural shorelines and those with stabilization structures (e.g., riprap, bulkhead, breakwater, restored marsh, and oyster reef) in a benefit-cost analysis. This would be an integrated assessment involving quantifying the ecosystem changes under different approaches and the ecosystem services developed that people value. This project could use the multi-attribute utility theory approach to evaluating different management approaches and the values they would generate.

Outcomes: Improved shoreline stabilization and the benefits that people receive from shoreline stabilization, balance between stabilization and ecosystem integrity.

Performance Measure: Improved shoreline stabilization and benefits people receive from improvements to shoreline stabilization balance between stabilization and ecosystem function.

Outputs: Report and data

Status: Proposed

Time Line: TBD

Notes: Project costs are assumed to be 50 percent NOAA and 50 percent partners.

Potential Partnerships: Duke University, National Estuarine Research Reserve (NERR), North Carolina Coastal Federation (NGOs), Elizabeth City State University (MSI), University of North Carolina Institute of Marine Sciences, and Carteret Community College. Possible funding sources include NERR and U.S. Army Corps of Engineers, and Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET).

NCCOS Centers: Center for Coastal Fisheries and Habitat Research (CCFHR)

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	150
Total Non Personnel	300
Leverage Ratio	2.00
Personnel (Contract Only)	0
Total NOS	150
Total (NOS+Other)	300

Project Title:

Metapopulation Modeling Incorporating Spatial Ecological and Socioeconomic Data

Justification: The economics of spatial decision making is still in its early stages of development. Current state-of-the-art research does not support full-blown empirical implementation of spatial bioeconomic models. However, managers in both fisheries and National Marine Sanctuaries are implementing no-take areas. There is great uncertainty about the net ecological and economic effects of no-take areas. Metapopulation modeling that incorporates economic decision-making models that recognize spatial heterogeneity in ecological environments in supporting fish populations are useful for simulating likely ranges of conditions to test whether there are possibilities for net gains or losses associated with no-take areas.

Methodology: Select a high-profile species/species group (i.e., one with high commercial and/or recreational value), and develop metapopulation model for stock assessment incorporating both spatial aspects of ecosystem and spatial use and decision making for commercial and/or recreational fishing. Use model to simulate different outcomes from using no-take areas as a fishery management tool.

Outcomes: Support for evaluating potential of no-take areas as a management tool for fisheries management and management in National Marine Sanctuaries.

Performance Measure: Peer-reviewed model published in major journal.

Outputs: Report and journal article

Status: Proposed

Time Line: TBD

Notes: Project costs assume NCCOS pays 50 percent and partners pay 50 percent.

Potential Partnerships: NOAA's National Marine Fisheries Service (NMFS) and Sea Grant. Potential funding sources include NMFS and Sea Grant. If a species in coral reef ecosystem is chosen, then can possibly get funding from NOAA's Coral Reef Conservation Project.

NCCOS Centers: Center for Coastal Fisheries and Habitat Research (CCFHR)

Project Costs:

Costs ($k)	Year 1
NOS Non Personnel	50
Total Non Personnel	100
Leverage Ratio	2.00
Personnel (Contract Only)	0
Total NOS	50
Total (NOS+Other)	100

Habitat Restoration Program: Project Descriptions

Project Title:

Analysis of Indirect Rates Applied in NRDA Case Cost Accounting

Justification: The application of indirect rates in Natural Resource Damage Assessment (NRDA) cost accounting is important for the recovery of costs associated with essential program activities that are not directly related to an NRDA case. Appropriately recouping these costs is crucial for Damage Assessment Center (DAC) to continue responding to and assessing natural resource injuries due to oil spills and hazardous substance releases.

Methodology: Analyze past NRDA cases to investigate the percentage of actual assessment costs recovered from settlement (e.g., 75 percent of actual costs incurred were recovered from settlement).

Outcomes: Recommendations for indirect rates applied in NRDA cases

Performance Measures: If recommendations for indirect rates applied in NRDA cases are developed.

Outputs: Reports

Status: Proposed

Timeline: TBD

Potential Partnerships: N/A

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	20	20
Total Non Personnel	20	20
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	6.75	6.75
Total NOS	26.75	26.75
Total (NOS+Other)	26.75	26.75

Project Title:

Benefits from Remediation, Restoration, and Redevelopment of Contaminated Urban Coastal Areas

Justification: The Office of Response and Restoration (OR&R) efforts to clean, restore, and redevelop coastal hazardous waste sites located in urban areas can result in significant benefits to the environment and individuals located in the affected local communities. Information on these benefits would be valuable in helping to communicate to government, industry, and the general public the potential benefits of an important NOS/OR&R program initiative. Another goal of this study would be to design a more rigorous and comprehensive methodology for estimating these types of benefits for subsequent, detailed project analyses.

Methodology: Selected contaminated coastal areas are analyzed to determine the potential economic and social benefits/impacts that result from the remediation, restoration and redevelopment of the contaminated area.

Outcomes: 1) Develop better understanding of benefits from remediation, restoration, and redevelopment of contaminated coastal areas and 2) Improve communication to government, industry, and public about the benefits that result from remediation, restoration, and redevelopment of contaminated coastal areas.

Performance Measures: Develop a measure of the types of economic and social benefits/impacts that result from the remediation, restoration, and redevelopment of a coastal hazardous waste site.

Outputs: Reports, data, and Web sites

Status: Proposed

Timeline: TBD

Potential Partnerships: U.S. Environmental Protection Agency, state trustee agencies, and local community groups.

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	100	100
Total Non Personnel	100	100
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	9	9
Total NOS	109	109
Total (NOS+Other)	109	109

Project Title:

CRRC/UNH Research Assistant Professor

Justification: Develop social science research agenda within partnership between the Office of Response and Restoration (OR&R) and the University of New Hampshire (UNH) in support of the Coastal Response Research Center (CRRC) mission for stimulating innovation in spill preparedness, response, assessment, and implementation of optimum spill recovery strategies.

Methodology: Candidate will establish an externally-funded research program of relevant social science research in support of CRRC mission of stimulating innovation in spill preparedness, response, assessment, and implementation of optimum spill recovery strategies.

Outcomes: Establish an externally-funded research program in support of CRRC mission of stimulating innovation in spill preparedness, response, assessment, and implementation of optimum spill recovery strategies.

Performance Measures: Candidate selected for position of Research Assistant Professor.

Outputs: Other

Status: Existing

Timeline: TBD

Potential Partnerships: Partnership between OR&R and UNH has already been established.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4	Year 5
NOS Non Personnel	5	5	5	5	5
Total Non Personnel	5	5	5	5	5
Leverage Ratio	1.00	1.00	1.00	1.00	1.00
Personnel (Contract Only)	100	100	100	100	100
Total NOS	105	105	105	105	105
Total (NOS+Other)	109	109	109	109	109

Project Title:

Economic Analysis for NRDA Cases

Justification: Economic analysis for Natural Resource Damage Assessment (NRDA) cases is the primary responsibility of the economists in the Damage Assessment Center. Various economic methods are utilized to determine the amount of natural resource injuries caused by oil spills or releases of hazardous materials and the amount of restoration that is needed to compensate the public for the interim losses that have occurred.

Methodology: Economic methods utilized vary case-by-case and depend on the types of natural resources injured. Example of methods include: benefits transfer, recreation demand models, stated preference surveys, and Habitat Equivalency Analysis. These methods have been used to estimate recreational fishing losses due to FCAs; losses in beach use, general recreational fishing, recreational shell fishing, and recreational shrimp fishing due to oil spills and releases of hazardous materials; and service losses for various habitat types.

Outcomes: Provide economic analysis for the resolution of NRDA cases through restoration of resource injuries caused by oil spills, releases of hazardous materials, and vessel groundings.

Performance Measures: N/A

Outputs: Reports, data, and Web sites

Status: Existing

Timeline: Ongoing

Potential Partnerships: Other natural resource trustees.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	0	0
Total Non Personnel	0	0
Leverage Ratio	-	-
Personnel (Contract Only)	118.44	98.61
Total NOS	118.44	98.61
Total (NOS+Other)	118.44	98.61

Project Title:

Economic Methods in NRDA – Education, Outreach, Training, and Policy

Justification: To assist with capacity building of NOAA's state, local, and tribal partners by sharing methods, tools, and approaches used in Natural Resource Damage Assessment (NRDA). Help strengthen NOAA partnerships with other natural trustees and the public in restoring NOAA trust resources.

Methodology: Provide guidance, training, and education to other natural resource trustees on economic methods used in NRDA through meetings, workshops, and production of guidance documents, memos, or presentations.

Outcomes: 1) Increase knowledge base of economics methods used in NRDA; 2)Provide guidance, training, and education to other natural resource trustees on economic methods used in NRDA; and 3) Strengthen partnerships with other natural resource trustees and the general public.

Performance Measures: 1) Continue building capacity of NOAA's state, local, and tribal partners knowledge of NRDA procedures; and 2) Continue strengthening partnerships with other natural trustees and the public.

Outputs: Reports, training, and other

Status: Existing

Timeline: Ongoing

Potential Partnerships: Other natural resource trustees, and the general public.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	5	5
Total Non Personnel	5	5
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	64.23	53.78
Total NOS	69.23	58.78
Total (NOS+Other)	69.23	58.78

Project Title:

Support to the Association of Environmental and Resource Economists

Justification: The Association of Environmental and Resource Economists (AERE) was established as a forum for exchanging ideas, stimulating research, and promoting graduate training in resource and environmental economics. Providing a means to help stimulate discussion among leading natural resource and environmental economists on methodological and policy issues is extremely valuable for continued advancement of this sub-discipline of economics. These advancements enable the Office of Response and Restoration (OR&R) economists to more effectively address natural resource valuation issues in both ongoing and future Natural Resource Damage Assessment (NRDA) cases. Furthermore, many current members of AERE have served as consultants to OR&R in the past and it can be expected that many will continue to do so in the future.

Methodology: Provide a forum to help stimulate discussion among leading natural resource and environmental economists on methodological and policy issues within this sub-discipline of economics.

Outcomes: 1. Support AERE workshops on methodological and policy issues in environmental economics; and 2) Help advance the discipline of natural resource and environmental economics.

Performance Measures: AERE continues to sponsor annual workshop.

Outputs: Other

Status: Existing

Timeline: Ongoing

Potential Partnerships: U.S. Department of Agriculture-Economic Research Service, U.S. Environmental Protection Agency, and the university community.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	20
Total Non Personnel	20
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	20
Total (NOS+Other)	20

Project Title:

Methods Development: California Recreation Valuation Study

Justification: The results of the project will be applicable to a wide range of valuation problems using the benefits transfer technique for Natural Resource Damage Assessment (NRDA) cases in coastal areas both inside and outside of the State of California.

Methodology: Random utility models are used to estimate the effects of beach water quality changes on people's choice of when and where to go to the beach. Will allow for the estimation of the economic value people place on different coastal water qualities. Results will be used to estimate the economic impacts of beach closures due to oil spills and other causes of diminished water quality, and the economic impacts for changes in water quality measures.

Outcomes: The results of the project can be used for a wide range of valuation problems using the benefits-transfer technique for future NRDA cases in coastal areas both inside and outside the State of California.

Performance Measures: N/A

Outputs: Reports, data, and Web sites

Status: Existing

Timeline: 06/30/1998-10/30/2006

Potential Partnerships: NOS-Special Projects Office, U.S. Department of the Interior-Mineral Management Service, California Department of Fish and Game-Office of Spill Prevention and Response, California State Water Resources Control Board, Santa Monica Bay Restoration Foundation, and university experts.

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	15	28.8
Total Non Personnel	15	28.8
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	3.18	3.18
Total NOS	18.18	31.98
Total (NOS+Other)	18.18	31.98

Project Title:

Methods Development: The Cost of Time in Recreation Demand Models

Justification: The study will assist researchers at NOAA and elsewhere in the development of travel-cost models of recreation demand. These models represent one of the leading techniques applied to natural resource valuation, and are an important tool in resource management decisions, cost-benefit analysis and natural resource damage assessment. This project involves a direct, market-based method of estimation that has not before been accomplished and NOAA is in a unique position to obtain the required data.

Methodology: The project will involve the analysis of survey data using a Random Utility Model of recreation demand. This is an econometric method for assessing the value of natural resource amenities using statistical estimation of a non-market demand curve based on data regarding respondents' choice of recreational sites.

Outcomes: The study would improve economic methods used for valuation of natural resources. In particular, the study would obtain an estimate of the cost of travel time, an important input into economic models of recreation demand.

Performance Measures: Results provide a statistically-valid estimate of the cost of travel time in recreational demand models.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Partnerships are anticipated with university researchers in the field of resource economics located in the selected regions.

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	25	25
Total Non Personnel	25	25
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	0
Total NOS	25	25
Total (NOS+Other)	25	25

Project Title:

Methods Development: Cross Habitat HEA Valuation

Justification: Measuring the public's perceptions of habitats and the services they provide, and estimating the monetary value of these habitats is useful for establishment of permits or entry fees, damage assessment, wilderness designation, etc. Determining the relative importance of different habitats and examining tradeoffs the public is willing to make is of crucial importance to resource managers when justifying restoration of one habitat type to compensate for the loss of another habitat type.

Methodology: This effort will involve leading focus groups to develop extensive knowledge about how these certain habitats (marsh, oyster reef, sediment, and SAV) are perceived, traded off, and valued, designing an original survey instrument, implementing the instrument, and conducting formal statistical analysis of the data. The study/survey may be repeated with different habitat types.

Outcomes: 1) To determine the tradeoffs people in a particular region are willing to make among the different habitat types and 2) To determine monetary values for these habitats to help strengthen resource management and damage assessment.

Performance Measures: 1) If model can be estimated that demonstrates the tradeoffs people are willing to make among different habitat types and 2) If monetary values for these habitats can be determined.

Outputs: Reports and data

Status: Existing

Timeline: Ongoing

Potential Partnerships: N/A

Project Costs:

Costs ($k)	FY 2004	FY 2005
NOS Non Personnel	30	15
Total Non Personnel	30	15
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	9.95	13.44
Total NOS	39.95	28.44
Total (NOS+Other)	39.95	28.44

Project Title:

Methods Development: Restoration Project Benefits Transfer

Justification: Support the Damage Assessment Center's ability to evaluate potential restoration projects (human/recreational-use related) to compensate the public for injuries to NOAA trust resources from releases of oil and hazardous materials.

Methodology: Analyze effects on human/recreational use activities that have resulted from restoration projects implemented for resolved Natural Resource Damage Assessment (NRDA) cases to determine potential gains from implementing similar projects in future NRDA cases. Analysis will also involve review of relevant literature and/or completed and ongoing research projects.

Outcomes: Define methods to compute estimates of benefits generated by restoration projects (human/recreational use related) to allow for value-to-value scaling of projects.

Performance Measures: If methods to compute litigation quality estimates of benefits generated by restoration projects (human/recreational use related) can be developed to allow for value-to-value scaling of projects.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Other federal and state trustees.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	75	75	75
Total Non Personnel	75	75	75
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	75	75	75
Total (NOS+Other)	75	75	75

Project Title:

Methods Development: Subsistence Angling in NRDA

Justification: A number of NOAA's Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cases involve long-term fishing advisories. As the agency moves toward adding more CERCLA cases, fishing advisories will play a larger role in damage assessment. Therefore, the ability to appropriately differentiate subsistence angling losses from more common recreational use losses will become increasingly important and necessary in future CERCLA/ Natural Resource Damage Assessment (NRDA) cases.

Methodology: 1) Review literature on subsistence angling and 2) Develop survey to elicit specific information and concerns from subsistence anglers regarding potential impacts from contamination

Outcomes: 1) Develop better understanding of potential impacts to subsistence anglers from contamination, 2) Develop appropriate methods to account for losses to subsistence anglers due to contamination, and 3) Develop policy for subsistence angling in NRDA.

Performance Measures: 1) Appropriate methods to account for subsistence angling losses are utilized in future NRDA cases and 2) Policy regarding subsistence angling in NRDA is developed.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: Other federal and state trustees and community interest groups.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	200	200	200
Total Non Personnel	200	200	200
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	200	200	200
Total (NOS+Other)	200	200	200

Project Title:

Methods Development: Valuation of Tribal Natural Resources in NRDA

Justification: NOAA Office of Response and Restoration (OR&R) is in a position to act on behalf of NOAA's tribal trustee partners in addressing this need directly in support of the mission of protecting and restoring natural resources injured from oil spills and releases of hazardous substances.

Methodology: Collect information about tribal uses of natural resources from several sources, such as tribal representatives, consulting firms, academic experts, and other government agencies to evaluate available information and existing economic methodologies used to determine the gaps that need to be addressed. Address gaps by supplementing the information collected with necessary project specific data (e.g., surveys) and data from existing sources.

Outcomes: 1) Provide guidance on how to more appropriately address injuries to tribal natural resources in NRDA, 2) Improve economic methods used to value tribal natural resources in Natural Resource Damage Assessment (NRDA), and 3) Help develop more cooperative relationship between state/federal and tribal trustees.

Performance Measures: 1) If more appropriate methods to address injuries to tribal natural resources are used in future NRDA cases and 2) More cooperative relationship between state/federal and tribal trustees is developed

Outputs: Reports and guidebooks

Status: Proposed

Timeline: TBD

Potential Partnerships: Other federal and state natural resource trustees and Native American Tribes.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	200	200	200
Total Non Personnel	200	200	200
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	200	200	200
Total (NOS+Other)	200	200	200

Project Title:

Survey of OR&R Business Services Group

Justification: The quality/efficiency with which the Office of Response and Restoration (OR&R) Business Services Group (BSG) provide services indirectly affects the ability of OR&R to respond to and assess natural resource injuries resulting from oil spills or releases of hazardous substances in a cost-effective manner. The project would enable the BSG to receive necessary feedback on the quality/efficiency with which they provide services to the various divisions of OR&R. Furthermore, the project could lead to the development of performance measures specific to the BSG.

Methodology: Develop survey instrument to track and monitor the types of services the BSG provides to the various divisions of OR&R. Survey would be administered to OR&R staff on an annual basis via secure Web access, hard copy, or a combination of both. Survey responses would be stored electronically for the analysis of current data and to track changes in responses over time.

Outcomes: The BSG provides various services essential to OR&R. The project will involve developing methods/procedures to track the performance of the BSG. The results of the project would lead to an annual report that provides a detailed evaluation of BSG's provision of services, list of potential recommendations for improvement/changes, and guidelines on how and when any necessary changes will be implemented.

Performance Measures: Completion of annual project report.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: N/A

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4	Year 5
NOS Non Personnel	10	10	10	10	10
Total Non Personnel	10	10	10	10	10
Leverage Ratio	1.00	1.00	1.00	1.00	1.00
Personnel (Contract Only)	6.75	6.75	6.75	6.75	6.75
Total NOS	16.75	16.75	16.75	16.75	16.75
Total (NOS+Other)	16.75	16.75	16.75	16.75	16.75

Emergency Response Program: Project Descriptions

Project Title:

Incorporating Non-traditional Resource Information into Hazardous Materials Response Decision Making

Justification: Support Hazardous Materials Response Division in responding to oil and chemical spills. Provide additional information to incorporate into the emergency response decision-making process to mitigate impacts to NOAA trust resources.

Methodology: Use combination of meetings and surveys to collect non-traditional resource information from local communities in multiple geographic areas.

Outcomes: 1) Develop better understanding of how to incorporate no-traditional resource information into emergency response decisions and 2) Vest community into emergency response process.

Performance Measures: Methods for incorporating non-traditional resource information into emergency response decisions are adopted.

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: N/A

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	200	200	200
Total Non Personnel	200	200	200
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	0
Total NOS	200	200	200
Total (NOS+Other)	200	200	200

Project Title:

Performance Metrics for Emergency Response Actions

Justification: The choice of response actions is critical to limiting natural resource injuries from oil spills and releases of hazardous materials; however, the public's perception of the performance metrics/measures used to describe these actions may have an influence on decisions made. Metrics that more appropriately describe the progress of response activities would result in less opposition to, or questioning of, the decisions made since the public will be properly informed.

Methodology: The project would involve using surveys and/or local community meetings to elicit information about the public's perceptions of, and preferences for, various response actions. The information collected would be utilized to develop performance metrics that explain to the public the progress and results of response actions in a more appropriate way.

Outcomes: The results of the project will provide information about the public's perceptions of various response actions during oil spills and/or releases of hazardous materials. The information collected will be utilized to develop appropriate performance metrics/measures to use when communicating information about response activities to the public.

Performance Measures: New performance metrics/measures are developed and utilized in reporting to the public.

Outputs: Reports and guidebooks

Status: Proposed

Timeline: TBD

Potential Partnerships: State trustee agencies.

Project Costs:

Costs ($k)	Year 1	Year 2
NOS Non Personnel	350	350
Total Non Personnel	350	350
Leverage Ratio	1.00	1.00
Personnel (Contract Only)	0	0
Total NOS	350	350
Total (NOS+Other)	350	350

Project Title:

Value of Emergency Response Alternatives

Justification: The ability to evaluate response alternatives prior to implementation is important; however, the current evaluation of response actions is limited in that it does not attempt to economically value the different alternatives under consideration (e.g., What is the value of injuries potentially avoided for different alternatives?). This information would allow for a preliminary cost/benefit analysis of the different alternatives and would provide further justification for the decisions made.

Methodology: Project would initially involve analysis of response actions for resolved Natural Resource Damage Assessment (NRDA) cases to determine costs/benefits of the decisions made relative to other response options that would have been reasonable to consider. Additional project phases could be specified based on the initial results.

Outcomes: The project would supply information that could be used for preliminary cost/benefit analyses of different response alternatives during future oil spills/releases of hazardous materials and would provide further justification for the decisions made throughout the response phase. Furthermore, this information would be helpful in developing more appropriate performance metrics/measures used to convey information to the public regarding the progress and/or effectiveness of response actions.

Performance Measures: N/A

Outputs: Reports and data

Status: Proposed

Timeline: TBD

Potential Partnerships: State and other federal trustees.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3
NOS Non Personnel	100	100	100
Total Non Personnel	100	100	100
Leverage Ratio	1.00	1.00	1.00
Personnel (Contract Only)	0	0	6.75
Total NOS	100	100	100
Total (NOS+Other)	100	100	100

Geodesy Program: Project Descriptions

Project Title:

Product & Service Evaluation: Detailed, Output-Specific Studies

Justification: Previously, no organized effort has been made by the Office of Coast Survey (OCS) to comprehensively enumerate, describe, and quantify the benefits, economic or otherwise, of its activities. This has possibly resulted in less-than-optimal investment decisions and justifications for appropriations. The Office intends to improve its understanding of the benefits it provides the nation, and then apply that information to investment decisions and to the appropriations process. In addition, recent guidance from the Administrator of NOAA has directed the agency's component organizations to develop and maintain such assessments to help him select and defend NOAA programs.

Methodology: Update the economic benefit estimation of Electronic Navigational Charts (ENCs). For one product, the Coast Survey has done an economic analysis. That area is Electronic Navigational Charts, the results of which were published in 1997. The study quantified the safety benefits from digital chart navigation and estimated their economic value. Task 2 will be to update this study with more recent data.

Outcomes: This study will result in a report that updates benefit estimates developed by Kite-Powell, Jin, and Farrow (1997) of the expected safety benefits from the use of electronic chart systems on commercial vessels operating in U.S. waters. This information will help OCS set funding priorities and generate a refined portfolio of products and services.

Performance Measures: N/A

Outputs: Reports

Status: Existing

Timeline: Ongoing

Potential Partnerships: None identified.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	10
Total Non Personnel	10
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	10
Total (NOS+Other)	10

Project Title:

NGS Economic Analysis to Support Commerce and Transportation

Justification: NOAA's performance-based management system requires the ability to measure and track over time the economic benefits and outcomes of major Commerce and Transportation (C&T) program elements. This requires development of databases to track users and uses, baseline estimates of benefits and changes over time, cost benefit analysis, and cost/effectiveness analysis to establish investment priorities between different product and service elements.

Methodology: A variety of methodologies depending upon the particular product and users being assessed.

Outcomes: A clearer picture of the uses, users, benefits, and impacts of information, products, and services to support the range of NOAA's Commerce and Transportation-related programs. This information would provide better justification of expenditures, and more than likely would show the enormous benefits that are leveraged from a relatively small federal investment.

Performance Measures: N/A

Outputs: Reports, data, and websites

Status: Proposed

Timeline: TBD

Potential Partnerships: National Ocean Economics Project (NOEP), U.S. Department of Transportation and the user community.

Notes: Current FY 2005 Program: $125k (from NOS, NOAA's Office of Program Planning and Integration (PPI), and the National Weather Service). Current program is a series of scoping studies and footprint analyses to determine scale of user sectors and pathways by which C&T information/products reach the user community. Analyses include the footprint analysis of parts of the transportation sector, costs and benefits of Physical Oceanographic Real-Time System (PORTS) instillations, scope of costs and benefits of surface transportation weather information, costs/benefits of aviation weather, and benefits of CO-OPS products and services.

Project Costs:

Costs ($k)	FY 2005
NOS Non Personnel	125
Total Non Personnel	125
Leverage Ratio	1.00
Personnel (Contract Only)	0
Total NOS	125
Total (NOS+Other)	125

Marine Transportation Systems Program: Project Descriptions

NOTE: There is no detailed projects list for Marine Transportation Systems, as the details of MTS projects were not yet determined.

Coasts, Estuaries, & Oceans Program: Project Description

Project Title:

Increasing Awareness of Risks and Vulnerability to Coastal Inundation

Justification: A number of NOAA needs assessments have illustrated the importance of integrating social science information into inundation related decision-support tools. Educating both managers and the public about the risks and vulnerability to coastal hazards is critical for protecting coastal communities from the impacts of extreme weather events. Reducing the loss of life and property from coastal hazards is a specific NOAA mandate and this project will help the agency achieve this objective. The NOAA, NOS, and CSC strategic plans all support activities seeking to improve information and decision support tools related to coastal hazards. This project will ensure that social science as well as natural science information are incorporated into these tools.

Methodology: Conduct assessments of the information needs of coastal and emergency managers using surveys, focus groups, and secondary data analysis. Generate and visualize information on the perceptions of risk and vulnerability among populations. Develop geo-referenced database of social and economic indicators of human infrastructure at risk from inundation. Develop decision support tools to guide managers in the use of social and economic data in evaluating and mitigating the social and economic impacts of coastal inundation. Develop training, outreach, and communication tools. Utilize environmental, social, and economic information to develop indicators of the effectiveness of different hazard management activities and measure performance.

Outcomes: Decision-support tools to guide managers in use of social/economic data in evaluating and mitigating the impacts of coastal inundation. Training, outreach, and communication tools to help managers to better incorporate information about social and economic impacts, and their community's perceptions of risk into emergency and coastal management activities. Develop indicators of effectiveness of different hazard mitigation and management activities to measure performance.

Performance Measures: Percentage of shoreline and inland areas that have improved abilty to reduce coastal hazards impacts; number of decision support tools built to address coastal hazards; number of trainings; number of outreach materials developed and distributed; number of managers trained; and number of indicators developed.

Outputs: Reports, data, Web sites, guidebooks, and training

Status: Existing

Timeline: TBD

Potential Partnerships: National Weather Service, Department of Homeland Security/Federal Emergency Management Agency, U.S. Geological Survey, U.S. Army Corps of Engineers, National Center for Atmospheric Research, National Aeronautical Charting Office, National Emergency Management Association, State Sea Grant Offices, and state and local emergency and coastal managers.

Notes: This project integrates biological, physical, and social science information to support management decision making.

Project Costs:

Costs ($k)	Year 1	Year 2	Year 3	Year 4	Year 5
NOS Non Personnel	300	300	300	300	300
Total Non Personnel	300	300	300	300	300
Leverage Ratio	1.00	1.00	1.00	1.00	1.00
Personnel (Contract Only)	100	100	100	100	100
Total NOS	400	400	400	400	400
Total (NOS+Other)	400	400	400	400	400

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